

From: Hodgson, Scott A. <Scott.Hodgson@terracon.com>
Sent: Friday, June 10, 2022 1:12 PM
To: Schultz, Josie M - DNR
Cc: atrailside@aol.com; Donald P. Gallo; mark.woppert@smoke-out.net; Chris Dockry
Subject: RE: RADR Approval Letter - Smoke Out Cleaners, BRRTS # 02-05-552214
Attachments: 58187103.Response to WDNR RADR Comments.June2022.pdf

Follow Up Flag: Flag for follow up
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Josie,

Attached is our response to your RADR review. Was not sure if this type of document needed to be uploaded through the portal. If so, let me know and we can do that. The work plan will follow soon after we receive your response to this letter so that we can efficiently address everything that is necessary.

Please let me know if you have any questions.

Scott A. Hodgson, P.G.
Senior Project Manager | Environmental Services



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Scott.Hodgson@terracon.com | Terracon.com



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From: Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>
Sent: Monday, April 11, 2022 9:09 AM
To: Hodgson, Scott A. <Scott.Hodgson@terracon.com>
Cc: atrailside@aol.com; Donald P. Gallo <DGallo@axley.com>; mark.woppert@smoke-out.net; Chris Dockry <Chris@teamselfstorage.com>
Subject: RE: RADR Approval Letter - Smoke Out Cleaners, BRRTS # 02-05-552214

Good Morning Scott,

Thank you for this update, I was actually planning to email you today so you beat me to it. I can provide a 60-day extension to the workplan and PFAS scoping to be submitted; please provide an update with workplan and scoping by June 10, 2022.

Thank you,
Josie

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Josie Schultz

Cell Phone: (920) 366-5685

Josie.Schultz@Wisconsin.gov



From: Hodgson, Scott A. <Scott.Hodgson@terracon.com>
Sent: Monday, April 11, 2022 9:02 AM
To: Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>
Cc: atrailside@aol.com; Donald P. Gallo <DGallo@axley.com>; mark.woppert@smoke-out.net; Chris Dockry <Chris@teamselfstorage.com>
Subject: RE: RADR Approval Letter - Smoke Out Cleaners, BRRTS # 02-05-552214

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Josie,

Wanted to give you an update on this. We are preparing a response to your RADR letter; however, Mark Woppert has had an ongoing family emergency and so he has not been able to obtain some additional information, particularly in regards to the PFAS questions you raised. We will be submitting the response as soon as he is able to obtain the information. We will submit a work plan for the additional vapor intrusion work after we come to agreement on the RADR. Everyone agrees that we want to advance this project as quickly as possible.

Scott A. Hodgson, P.G.
Senior Project Manager | Environmental Services



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From: Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>
Sent: Tuesday, February 8, 2022 2:43 PM
To: mark.woppert@smoke-out.net; Chris Dockry <Chris@teamselvestorage.com>
Cc: Hodgson, Scott A. <Scott.Hodgson@terracon.com>; atrailside@aol.com; Donald P. Gallo <DGallo@axley.com>
Subject: RADR Approval Letter - Smoke Out Cleaners, BRRTS # 02-05-552214

Mark & Chris,

Attached to this email is DNR's conditional approval of the remedial action documentation report submitted for the injection. Please read the letter carefully and reach out if you have any questions.

Thank you,
Josie

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customerurvey> to evaluate how I did.

Josie M. Schultz

Hydrogeologist – Northeast Region Remediation and Redevelopment Team
Wisconsin Department of Natural Resources
2984 Shawano Avenue, Green Bay, WI 54313-6727
Cell Phone: 920-366-5685
Josie.Schultz@Wisconsin.gov



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June 10, 2022



Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, Wisconsin 54313

Attention: Ms. Josie Schultz
Telephone: 920.366.5685
E-mail: Josie.Schultz@wisconsin.gov

RE: Response to WDNR RADR Comments
Smoke-Out Cleaners
1631 Brookfield Avenue, Unit D-4
Howard, Wisconsin ("Property")
BRRTS #02-05-552214
Terracon Project No. 58187103

Dear Ms. Schultz

On behalf of Smoke-Out Cleaners (Smoke-Out), Terracon Consultants, Inc. (Terracon) has prepared this response to the Wisconsin Department of Natural Resources (WDNR) February 8, 2022, letter which provided comments on Terracon's December 16, 2021, Remedial Action Documentation Report (RADR). The RADR provided documentation of remedial action activities at the Smoke-Out site located at 1631 Brookfield Avenue, Unit D-4, Howard, Wisconsin, including injection of groundwater treatment amendments in the area of concern near the dry-cleaning machine, installation of a sub-slab depressurization system (SSDS), and post-injection vacuum, gas, and groundwater monitoring. The report also addressed emerging contaminants including per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane. A completed "Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request" (WDNR form 4400-237) and fee were submitted with the RADR requesting WDNR review and written comment.

WDNR provided comments related to groundwater, vapor intrusion, and PFAS, prefaced by the following comment:

"The RADR is conditionally approved with the understanding that groundwater monitoring will continue at the site for approximately two years following the degradation of the injected amendment. Per a phone conversation with your consultant, Scott Hodgson of Terracon, the amendment is expected to be fully degraded within three to four years and is dependent on monitoring of total organic carbon concentrations in groundwater."



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Geotechnical



Environmental



Construction Materials



Facilities

The WDNR comments are summarized by category below followed by Terracon's response in bold italics.

Groundwater

1. "Groundwater is defined laterally, however DNR is requiring an evaluation of if the vertical extent is defined in the source area, including direction of deep groundwater flow and depth and construction of on-site potable wells. If adequate justification cannot be provided for vertical extent being defined, then a piezometer may need to be installed within or directly adjacent to the source area. If contamination is present in the groundwater at depth, additional evaluation may be needed to define the extent."

The previous consultant reviewed construction logs of the potable wells onsite and indicated that limestone was present at a depth of approximately 80 feet below ground surface (bgs), but apparently did not discuss details or include construction logs in their report. They did sample each of the four potable wells on the property in March 2017. There was no detection of volatile organic compounds (VOCs) in any of the potable wells sampled. Terracon sampled potable well PW-4, which is adjacent east to Smoke-Out Cleaners in December 2020 and again there was no detection of VOCs.

There are two observation well/piezometer nests onsite, MW-8/PZ-1 and MW-10/PZ-2. The boring log for piezometer PZ-1 indicates silty sand and fine sand was present to a depth of 8.4 feet bgs underlain by clay to the boring terminus at 30 feet bgs (Giles August 31, 2017, Site Investigation Report). The boring log for PZ-2 (see Terracon's January 9, 2020, SSI-RAP) indicates sand and silty sand was present to a depth of approximately 23 feet bgs underlain by clay to the boring terminus at 26 feet bgs. A comparison of water levels in the two well nests indicate an upward vertical gradient ranging from approximately 0.001 to 0.017 foot per foot (ft/ft) is typically present but occasionally there is a downward vertical gradient ranging from 0.004 to 0.019 ft/ft. The most recent measurements (September 2021) indicated an upward vertical gradient of 0.002 ft/ft at well nest MW-8/PZ-1 and a downward vertical gradient of 0.013 ft/ft at well nest MW-10/PZ-2. Historically there has been no detection of chlorinated volatile organic compounds (CVOCs) in these four monitoring wells.

Well Construction Reports for potable wells on the property (attached) indicate that each well was cased to the limestone/dolomite contact at approximately 80 feet bgs and were completed in sandstone at depths ranging from 181 to 222 feet bgs. The reported stratigraphy indicated sand from the surface variably to 10 to 20 feet bgs underlain by clay and hardpan to 79 to 82 feet bgs, followed by limestone/dolomite variably from 83 to 160 feet bgs and sandstone to the boring termini.

Based on the stratigraphy (sand over clay limiting downward plume movement), typical upward vertical gradient, potable well construction and depth, potable well sampling results (no detect even prior to remediation), relatively young age of the release, overall low to moderate contaminant mass prior to remediation, and destruction of that contaminant mass since injection, there is no reason to pursue additional investigation at depth.

2. “As outlined above, additional rounds of groundwater sampling are required to confirm decreasing chlorinated volatile organic compound (CVOC) trends post-degradation of the injected amendment. This is to include continued monitoring of natural attenuation parameters, and annual sampling of monitoring wells exterior of the source area to ensure the injection is not pushing contamination elsewhere.”

It is risky to wait 3 to 4 years until the groundwater treatment amendments have been spent and then perform quarterly sampling for 2 years to assess whether the injection pushed contamination elsewhere. Terracon is very careful when we perform injections and we sample the entire monitoring well network every four quarters as per the monitoring plan presented in the Remedial Action Plan that WDNR accepted (e.g. December 2020 and the next round whenever we can get out there) to assess whether the plume has been displaced. As shown in the attached historical groundwater results table (Table 1), the December 2020 results indicated no detect at the limit of detection in the surrounding exterior monitoring wells. In addition, the results at interior monitoring wells at the margins of the plume (MW-1, MW-2, and MW-4) did not exhibit an increase in contaminant concentrations during the first post-injection sampling round or any subsequent sampling round that would be indicative of the plume being displaced or pushed outward from the source at monitoring well MW-3. Therefore, there is no evidence to suggest that the plume was displaced during injection.

Terracon monitors total organic carbon (TOC) at critical monitoring points during pre-injection baseline monitoring (June 9, 2020), immediately after injection (June 11, 2020), and in post-injection monitoring events as a measure of when the injected amendment is spent (see the attached Table 2). The typical pattern is to see approximately 5 milligrams per liter (mg/L) TOC prior to injection, a spike after injection, and gradually decrease over time in post-injection monitoring events. The amendment is generally considered spent when post-injection TOC falls to below 20 mg/L, even though that is still above pre-injection values. Based on the monitoring data, the amendment was already spent in the source area at monitoring well MW-3 as of December 2020. The attached historical groundwater results table (Table 1) presents the historical groundwater contaminant results. Monitoring well MW-3, which is nearest the old dry-cleaning machine (see the attached map) and could be considered “the source area”, had the highest overall concentrations historically. But as of September

2021, most of the CVOCs have been degraded and only vinyl chloride remains at 0.55 micrograms per liter ($\mu\text{g/L}$), just above its enforcement standard (ES) of 0.2 $\mu\text{g/L}$. Also attached is the groundwater geochemical results table (Table 2), which presents historical geochemical field and lab parameter results. As mentioned, we consider the amendment spent when TOC decreases to below 20 milligrams per liter (mg/L) after initially increasing dramatically immediately after injection. At monitoring well MW-3, TOC initially increased to 690 mg/L but has been below 20 mg/L for the last four sampling rounds (December 2020 and March, June, and September 2021) without rebound of CVOC concentrations.

Thus, 1 year of quarterly monitoring has already been completed after the amendment was “spent” in the source area, and only one more year is needed. Therefore, Smoke-Out proposes to collect two more rounds of post-injection groundwater samples (May/June and September/October 2022). If the results are similar to the September 2021 results, closure should be appropriate from the groundwater perspective.

Vapor

1. “In the attached email sent to Scott Hodgson on March 4, 2021, DNR stated that additional vapor sampling is required at the site, including a sanitary sewer investigation, indoor air sampling at the adjacent Badger Scale tenant space to the south, and potentially sub-slab sampling beneath the adjacent Diamond Builders tenant space to the north.”

This work is planned to occur during the next groundwater sampling event after approval of the work plan. Details will be included in the work plan.

2. “DNR understands that the vapor mitigation system (VMS) is planned to be decommissioned in the near future. DNR guidance RR-800 requires three rounds of sampling after shut-down as part of decommissioning; first event 2 to 4 weeks after shut-down, second event 2 to 6 months after shut-down, and third event 1 year after shutdown, with at least two of the samples collected during heating season. Before fully decommissioning the system, you must provide data to the DNR that supports the criteria for decommissioning and request DNR’s approval to remove the vapor mitigation system from the property. Once removal is approved, dismantling/abandonment of the system will need to be documented and submitted to the DNR.”

The system is currently running and will be shut down 2 to 4 weeks prior to sampling. The initial decommissioning sampling event will be performed in conjunction with the next groundwater and vapor sampling event after submittal and approval of the work plan. Details will be included in the forthcoming work plan.

PFAS (Per and polyfluoro alkyl substances)

“Prior to DNR providing an answer for if PFAS sampling is required, DNR needs additional information on site operations and history, including:

- confirmation that the drycleaner began operation in 2005;
- information for the source of contamination (i.e. new or used solvent) and the estimated duration of discharge (e.g. past practices, known discharges);
- information for what type of materials were dry cleaned on site (e.g. large commercial or household items); and
- an evaluation of if a PFAS investigation is needed in the area of the holding tank.”

Bullet 1: The business started as a dry store at another location in the early 2000’s. In 2004, they moved into the current facility, installed a dry-cleaning machine (DCM), and began dry-cleaning operations. Dry-cleaning operations, although minimal, continued until the DCM was removed in 2020. Therefore, only a short operational period (when tetrachloroethene [PCE] was used) elapsed between when the DCM was installed and when a release was discovered in August 2008.

Bullet 2: The known contaminant plume was in the immediate vicinity of the DCM. However, the DCM had containment under it and there were no known spills or leaks of new or spent solvent during the operational period. According to Mark Woppert, owner of Smoke-Out Cleaners, they were careful to prevent spills as they had other older facilities where there had been a release. During the time of active dry cleaning at the site (2004 through 2020), Smoke-Out only did approximately \$100,000 of dry-cleaning business and only used approximately 165 gallons of PCE (Dowper™ Solvent) overall. Further, filters were never replaced or disposed during operations from 2004 through 2020, which eliminates the used filters as a potential source. The only likely source was new solvent spilled or leaked at the time the DCM was initially installed and set up by a third party since the release had already occurred when soil borings were advanced in August 2008.

Material Safety Data Sheets (MSDSs) for products used at the site do not indicate the presence of PFAS. A copy of the MSDS for each product used at Smoke-Out is attached.

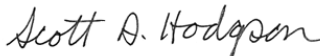
Bullet 3: Smoke-Out primarily dealt with residential fire claims including mostly smoke and/or water damaged clothing, textiles, and curtains. Large or hot fires typically caused irreparable damage, so claims were mostly smoldering type fires that produced smoke damage. Fancy/designer drapes and fire-retardant drapes such as might be found in nursing homes were subcontracted to a firm in Milwaukee to dry-clean. As such, neither the type of fires nor the materials cleaned were likely sources of potential

PFAS exposure. Smoke-Out only occasionally did small commercial claims usually only one or less per year. These were typically small commercial operations such as bars where items may have included curtains, aprons, and bar rags.

Bullet 4: Based on the information given above there is no data to suggest that PFAS were present in spent solvent. The MSDSs for products used at the facility indicate that PFAS were not used at the facility nor were operations performed that would require PFAS-containing products. Further, the contaminant plume was in the immediate vicinity of the DCM as evidenced by the highest contaminant concentrations in both soil and groundwater documented in observation well MW-3, which was the closest monitoring point to the DCM. The contaminant concentrations decreased radially away from the DCM and the contaminant plume did not appear to encompass the floor drain. Therefore, there does not appear to be any data to suggest that PFAS were used at the site, were present in used solvent, or that there was a release into the floor drain. As such, there is no reason to suspect that a PFAS investigation near the holding tank is necessary.

If you have questions or require additional information, please do not hesitate to contact our office.

Sincerely,



Scott A. Hodgson, P.G.
Senior Project Manager

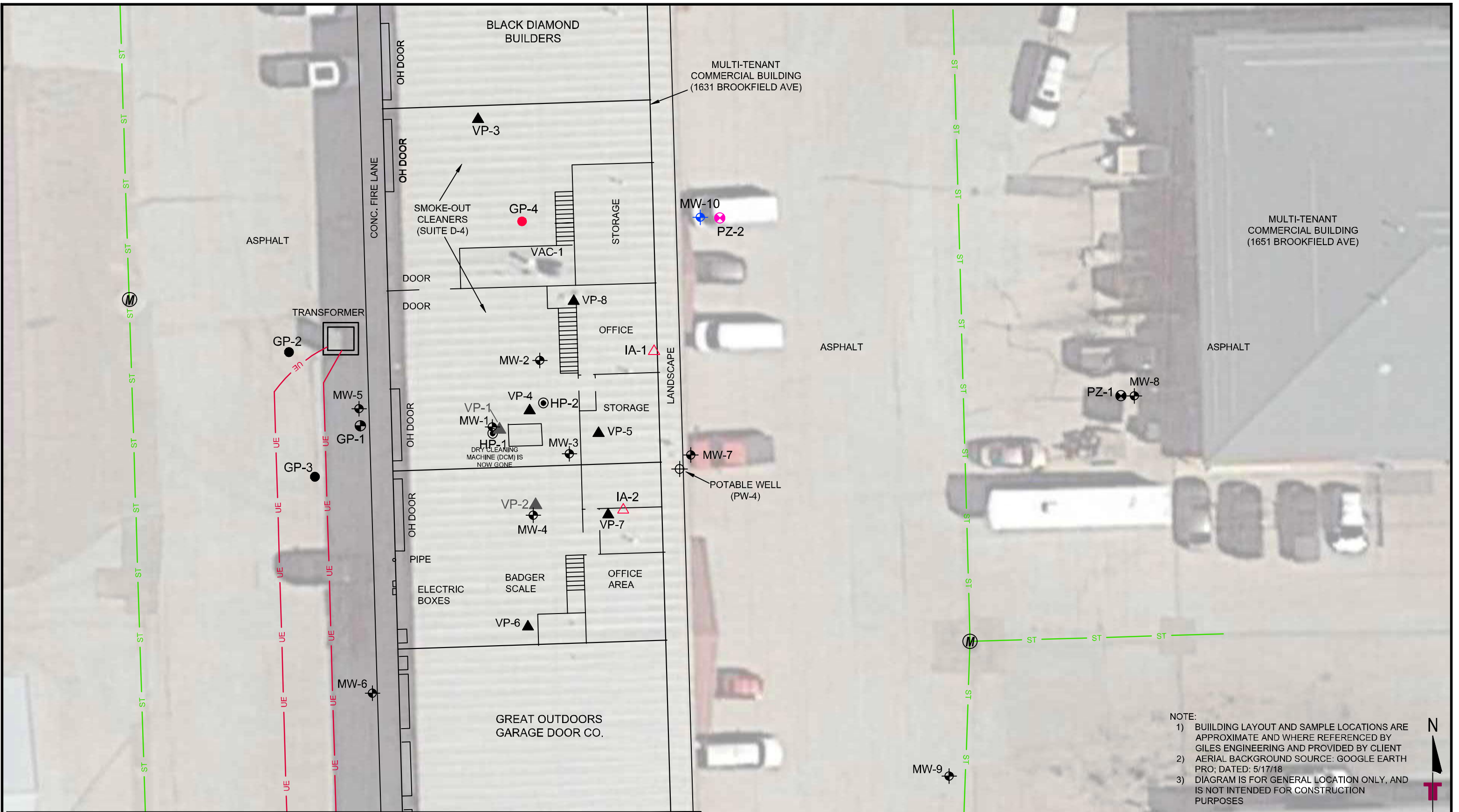


Edmund A. Buc, P.E.
Environmental Department Manager

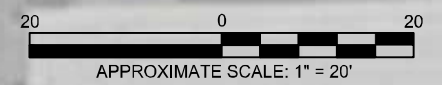
Attachments – Figure 1
Table 1
Table 2
Potable Well Construction Logs
Material Safety Data Sheets

SAH/EAB:sah/N:\Projects\2018\58187103\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\58187103.Response to WDNR RADR Comments.June2022.docx

Copy to: Mark Woppert, Smoke-Out Cleaners
Chris Dockry, Agent for Smoke-Out Cleaners
Don Gallo, Axley Brynelson LLP
File



NOTE:
 1) BUILDING LAYOUT AND SAMPLE LOCATIONS ARE APPROXIMATE AND WHERE REFERENCED BY GILES ENGINEERING AND PROVIDED BY CLIENT
 2) AERIAL BACKGROUND SOURCE: GOOGLE EARTH PRO; DATED: 5/17/18
 3) DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES



LEGEND	
TERRACON SAMPLE LOCATIONS	GILES ENGINEERING SAMPLE LOCATIONS
OBSERVATION WELL	OBSERVATION WELL
PIEZOMETER	PIEZOMETER
DIRECT-PUSH SOIL BORING	DIRECT-PUSH SOIL BORING/TEMPORARY WELL
INDOOR AIR SAMPLE POINT	DIRECT-PUSH SOIL BORING
	SOIL VAPOR POINT
	FORMER SOIL VAPOR POINT
	POTABLE WELL
	MANHOLE
	UNDERGROUND ELECTRIC LINE
	STORM SEWER LINE

Project Mgr:	SAH	Project No.	58187103
Drawn By:	JLM (41)	Scale:	AS SHOWN
Checked By:	SAH	File No.	58187103C1
Approved By:	SAH	Date:	10/2021

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 Consulting Engineers and Scientists
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SITE MAP

SMOKE-OUT CLEANERS
 1631 BROOKFIELD AVENUE, UNIT D-4
 HOWARD, WISCONSIN

FIGURE
1
 PDF EDITS (FIG2 SD)

TABLE 1
Groundwater Analytic Test Results Summary-VOCs

Smoke-Out Cleaners
Howard, Wisconsin
Terracon Project No. 58187103

Sample ID	Sample Date	Volatile Organic Compounds (VOCs - µg/L)										
		Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene (cis-DCE)	trans-1,2-Dichloroethene (trans-DCE)	Vinyl chloride (VC)	1,1-Dichloroethene (DCE)	Chloroform	Chloromethane	1,2,4-Trimethylbenzene	Toluene	Total Xylene
NR 140 WAC, PAL¹		0.5	0.5	7	20	0.02	0.7	0.6	3	96	160	400
NR 140 WAC, ES²		5	5	70	100	0.2	7	6	30	480	800	2,000
MW-6	03/31/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	06/02/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	3.8	<0.50	<0.50	<1.5
	09/28/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/14/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.74	<0.73
MW-7	03/31/16	24.2	2.8	0.94	<0.26	<0.18	<0.24	<2.5	<0.50	<0.50	<0.50	<1.5
	06/03/16	9.8	1.1	0.51	<0.26	<0.18	<0.41	<2.5	4.7	<0.50	<0.50	<1.5
	09/28/16	117	14.3	13.8	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/14/17	0.85	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.17	<0.73
BD-2	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.17	<0.73
	12/28/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73
MW-8	06/03/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	09/28/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/14/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.74	<0.73
	12/29/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73
MW-9	06/03/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	8.1	<0.50	<0.50	<1.5
	09/28/16	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<5.0	<0.50	<0.50	<1.5
	03/14/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.79	<0.73
	12/29/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73
MW-10	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.17	<0.73
PZ-1	03/15/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<2.5	<0.50	<0.50	<0.50	<1.5
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.66	<0.73
	12/28/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73
PZ-2 BD-1	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.30	<0.73
	03/28/19	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	0.28	<0.73
	12/28/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73
PW-1	03/15/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<1.3	<2.5	<0.50	<0.50	<1.5
PW-2	03/15/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<1.3	<2.5	<0.50	<0.50	<1.5
PW-3	03/15/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<1.3	<2.5	<0.50	<0.50	<1.5
PW-4	03/15/17	<0.50	<0.33	<0.26	<0.26	<0.18	<0.41	<1.3	<2.5	<0.50	<0.50	<1.5
	12/29/20	<0.33	<0.26	<0.27	<1.1	<0.17	<0.24	<1.3	<2.2	<0.84	<0.27	<0.73

Notes:

¹NR 140, Wisconsin Administrative Code, (WAC) Preventive Action Limit (PAL), Register, February 2017

²NR 140, WAC, Enforcement Standard (ES), Register, February 2017

Results expressed in micrograms per liter (µg/L)

BD = Blind Duplicate

Only compounds detected by the laboratory are included on the table.

Samples from 2008 through 2017 were collected by Giles Engineering, Inc. Samples from March 2019 onward were collected by Terracon

Chloroethene (6.8 µg/L in MW-3), Benzene (0.57 µg/L in MW-1 and 0.80 µg/L in MW-4), and Ethylbenzene (0.35 µg/L in MW-1

and 0.36 µg/L in MW-4) were first detected in the September 17, 2020 sampling event

XX.XX Exceeds NR 140 PAL

XX.XX Exceeds NR 140 ES

<X.XX Analyte not detected above its laboratory limit of detection

Well Construction Report WISCONSIN UNIQUE WELL NUMBER				DT091		Drinking Water and Groundwater - DG/5 Department of Natural Resources, Box 7921 Madison WI 53707				Form 3300-077A
Property Owner HAVERKORN, MIKE				Phone # (414)434-9522		1. Well Location				Fire # (if avail.)
Mailing Address 2852 NORTHWOOD RD						Village of HOWARD				
City GREEN BAY				State WI	Zip Code 54313	Street Address or Road Name and Number				
County Brown				Co. Permit #	Notification #	Subdivision Name		Lot #	Block #	
Well Constructor (Business Name) VAN DE YACHT LEO WELL DRILLING I				Lic. # 6097	Facility ID # (Public Wells)	Latitude / Longitude in Decimal Degree (DD)		Method Code		
Address 3383 OAK FOREST DR GREEN BAY WI 54313				Well Plan Approval #		°N °W		GPS008		
Hicap Permanent Well #				Common Well #	Specific Capacity 0.6	SE or Govt Lot #	NW 3	Section 24	Township N	Range 20 E
3. Well serves 1 # of WAREHOUSE				Hicap Well ? No		2. Well Type New Well				
Private, potable				Hicap Property ? No		of previous unique well #				constructed in
Heat Exchange ___ # of drillholes				Hicap Potable ?		Reason for replaced or reconstructed well ?				
						WAREHOUSE				
						Construction Type Drilled				
4. Potential Contamination Sources - ON REVERSE SIDE										
5. Drillhole Dimensions and Construction Method						8. Geology				
Dia. (in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole		Lower Open Bedrock	Geology Codes	8. Geology Type, Caving/Noncaving, Color, Hardness, etc...		From (ft.)	To (ft.)
9	Surface	82	Yes Rotary - Mud Circulation			S	SAND		Surface	20
6	82	182	Yes Rotary - Air			C	CLAY		20	75
			Rotary - Air & Foam			P	HARDPAN		75	82
			Drill-Through Casing Hammer			L	LIMESTONE		82	160
			Reverse Rotary			N	SANDSTONE		160	182
			Cable-tool Bit ___in. dia...							
			Dual Rotary							
			Temp. Outer Casing ___in. dia							
			Removed? ___depth ft. (If NO explain on back side)							
6. Casing, Liner, Screen						9. Static Water Level			11. Well Is	
Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly			From (ft.)	To (ft.)	80 ft. below ground surface			12 in. above grade	
6	NEW BLACK STEEL PLAIN END WELDED ASTM-A-53B 18.97#PER FT. SAWHILL PIPE			Surface	82	10. Pump Test			Developed ? Yes	
Dia. (in.)	Screen type, material & slot size			From (ft.)	To (ft.)	Pumping level 120 ft. below surface			Disinfected ? Yes	
						Pumping at 25 GP M for 2 Hrs.			Capped ? Yes	
						Pumping Method ?				
7. Grout or Other Sealing Material						12. Notified Owner of need to fill & seal ?				
Method						Filled & Sealed Well(s) as needed? No				
Kind of Sealing Material						N/APP				
DRILL SLURRY										
						13. Constructor / Supervisory Driller				
						Lic #		Date Signed		
						LV		10-27-1993		
						Drill Rig Operator		Lic or Reg #		Date Signed
						TV				10-27-1993

4a. Potential Contamination Sources

Is the well located in floodplain ? No

Type	Qualifier	Distance
Building Overhang		12

Comment:

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 02-04-1994

Created by: HFRC LOAD

Updated On: 02-04-1994

Updated by: MIGRATION

Well Construction Report WISCONSIN UNIQUE WELL NUMBER				KS080		Drinking Water and Groundwater - DG/5 Department of Natural Resources, Box 7921 Madison WI 53707				Form 3300-077A	
Property Owner MIKE HAVERKORN CONST				Phone # (414)434-3983		1. Well Location				Fire # (if avail.)	
Mailing Address 2852 NORTHWOOD RD						Village of HOWARD					
City GREEN BAY				State WI	Zip Code 54313	Street Address or Road Name and Number					
County Brown				Co. Permit #	Notification #	Subdivision Name		Lot #	Block #		
Well Constructor (Business Name) VAN DE YACHT LEO WELL DRILLING I				Lic. # 6097	Facility ID # (Public Wells)	Latitude / Longitude in Decimal Degree (DD)		Method Code			
Address 3383 OAK FOREST DR GREEN BAY WI 54313				Well Plan Approval #		°N °W		GPS008			
Hicap Permanent Well #				Common Well #	Specific Capacity 0.7	SE or Govt Lot #	NW 3	Section 24	Township N	Range 20	E
3. Well serves 1 # of WAREHOUSE				Hicap Well ? No		2. Well Type New Well					
Private, potable				Hicap Property ? No		of previous unique well # constructed in					
Heat Exchange ___ # of drillholes				Hicap Potable ?		Reason for replaced or reconstructed well ?					
						WAREHOUSE					
						Construction Type Drilled					
4. Potential Contamination Sources - ON REVERSE SIDE											
5. Drillhole Dimensions and Construction Method						8. Geology					
Dia. (in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole		Lower Open Bedrock	Geology Codes	8. Geology Type, Caving/Noncaving, Color, Hardness, etc...		From (ft.)	To (ft.)	
9	Surface	79	Yes Rotary - Mud Circulation			S	SAND		Surface	10	
6	79	222	Yes Rotary - Air			C	CLAY		10	70	
			Rotary - Air & Foam			P	HARDPAN		70	79	
			Drill-Through Casing Hammer			L	LIMESTONE		79	140	
			Reverse Rotary			N	SANDSTONE		140	222	
			Cable-tool Bit ___in. dia...								
			Dual Rotary								
			Temp. Outer Casing ___in. dia								
			Removed? ___depth ft. (If NO explain on back side)								
6. Casing, Liner, Screen						9. Static Water Level			11. Well Is		
Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly			From (ft.)	To (ft.)	40 ft. below ground surface			12 in. above grade		
6	NEW BLACK STEEL PLAIN END WELDED ASTM A53B 18 97LB PER FT SAWHILL PIPE			Surface	79	10. Pump Test			Developed ? Yes		
Dia. (in.)	Screen type, material & slot size			From (ft.)	To (ft.)	Pumping level 100 ft. below surface			Disinfected ? Yes		
						Pumping at 40 GP M for 2 Hrs.			Capped ? Yes		
7. Grout or Other Sealing Material						Pumping Method ?					
Method						12. Notified Owner of need to fill & seal ?					
Kind of Sealing Material		From (ft.)	To (ft.)	# Sacks Cement		Filled & Sealed Well(s) as needed?					
DRILL SLURRY		Surface	79								
13. Constructor / Supervisory Driller						Lic #	Date Signed				
LV							01-16-1996				
Drill Rig Operator						Lic or Reg #	Date Signed				
TV							01-16-1996				

4a. Potential Contamination SourcesIs the well located in floodplain ? No

Type	Qualifier	Distance	Type	Qualifier	Distance
Building Overhang		10	Collector Sewer - San or Storm		75
Clearwater Sump		30	Foundation Drain to Clearwater		12
			Sewer - Building Sanitary		50

Comment:

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 05-10-1996

Created by: HFRC LOAD

Updated On: 10-24-2002

Updated by: WELL PROCESS

Well Construction Report WISCONSIN UNIQUE WELL NUMBER				NQ153		Drinking Water and Groundwater - DG/5 Department of Natural Resources, Box 7921 Madison WI 53707				Form 3300-077A
Property Owner MIKE HAVERKORN CONST				Phone # (920)434-3983		1. Well Location				Fire # (if avail.)
Mailing Address 2852 NORTHWOOD RD						Village of HOWARD				
City GREEN BAY				State WI	Zip Code 54313	Street Address or Road Name and Number BROOKFIELD RD				
County Brown	Co. Permit #	Notification #	Completed 09-21-1999		Subdivision Name			Lot #	Block #	
Well Constructor (Business Name) VAN DE YACHT LEO WELL DRILLING INC			Lic. # 6097	Facility ID # (Public Wells)		Latitude / Longitude in Decimal Degree (DD)			Method Code	
Address 3383 OAK FOREST DR GREEN BAY WI 54313			Well Plan Approval #		°N		°W		GPS008	
			Approval Date (mm-dd-yyyy)		SE	NW	Section 3	Township 24 N	Range 20 E	
Hicap Permanent Well #		Common Well #	Specific Capacity 0.5		2. Well Type New Well			of previous unique well # constructed in		
Hicap Well ? No		Hicap Property ? No		Reason for replaced or reconstructed well ?			WAREHOUSE			
Heat Exchange ___ # of drillholes		Hicap Potable ?		Construction Type Drilled						
4. Potential Contamination Sources - ON REVERSE SIDE										
5. Drillhole Dimensions and Construction Method						8. Geology				
Dia. (in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole		Lower Open Bedrock	Geology Codes	8. Geology Type, Caving/Noncaving, Color, Hardness, etc...		From (ft.)	To (ft.)
9	Surface	83	Yes Rotary - Mud Circulation			S	SAND		Surface	35
6	83	202	Yes Rotary - Air			C	CLAY		35	78
			Rotary - Air & Foam			P	HARDPAN		78	83
			Drill-Through Casing Hammer			L	LIMESTONE		83	135
			Reverse Rotary			N	SANDSTONE		135	202
			Cable-tool Bit ___in. dia...							
			Dual Rotary							
			Temp. Outer Casing ___in. dia							
			Removed? ___depth ft. (If NO explain on back side)							
6. Casing, Liner, Screen						9. Static Water Level			11. Well Is	
Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly			From (ft.)	To (ft.)	40 ft. below ground surface			12 in. above grade	
6	NEW BLACK STEEL PLAIN END WELDED ASTM-A-53B, 18.97 # PER FT. SAWHILL PIPE			Surface	83	10. Pump Test			Developed ? Yes	
Dia. (in.)	Screen type, material & slot size			From (ft.)	To (ft.)	Pumping level 120 ft. below surface			Disinfected ? Yes	
						Pumping at 40 GP M for 2 Hrs.			Capped ? Yes	
						Pumping Method ?				
7. Grout or Other Sealing Material						12. Notified Owner of need to fill & seal ?				
Method						Filled & Sealed Well(s) as needed? No				
Kind of Sealing Material						N/APP				
DRILL SLURRY										
						13. Constructor / Supervisory Driller		Lic #	Date Signed	
						LV			09-21-1999	
						Drill Rig Operator		Lic or Reg #	Date Signed	
						KS			09-21-1999	

4a. Potential Contamination Sources

Is the well located in floodplain ? No

Type	Qualifier	Distance
Building Overhang		4

Comment:

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 12-17-1999

Created by: WELL CONST LOAD

Updated On: 12-17-1999

Updated by: WELL PROCESS

Well Construction Report WISCONSIN UNIQUE WELL NUMBER				AAH224		Drinking Water and Groundwater - DG/5 Department of Natural Resources, Box 7921 Madison WI 53707				Form 3300-077A					
Property Owner ALLEN LEE INVESTMENTS LLC					Phone #			1. Well Location			Fire # (if avail.)				
Mailing Address 1651 BROOKFIELD AVE STE A					Village of HOWARD			Street Address or Road Name and Number							
City GREEN BAY					State WI		Zip Code 54313				BROOKFIELD AVENUE				
County Brown		Co. Permit #		Notification #		Completed		Subdivision Name		Lot #	Block #				
				8266224202		02-11-2021									
Well Constructor (Business Name)				Lic. #	Facility ID # (Public Wells)			Latitude / Longitude in Decimal Degree (DD)		Method Code					
VAN DE YACHT LEO WELL DRILLING INC				6097				44.587 °N -88.0585 °W		GPS008					
Address 1267 LAKEVIEW DR GREEN BAY WI 54313				Well Plan Approval #			SW	NE	Section	Township	Range				
				Approval Date (mm-dd-yyyy)			3	24	N	20		E			
Hicap Permanent Well #		Common Well #		Specific Capacity			Reason for replaced or reconstructed well ?								
				0.8											
3. Well serves 1 # of BUILDING				Hicap Well ?		No		2. Well Type New Well							
Non-community				Hicap Property ?		No		of previous unique well # constructed in							
Heat Exchange ___ # of drillholes				Hicap Potable ?		No		Construction Type Drilled							
4. Potential Contamination Sources - ON REVERSE SIDE															
5. Drillhole Dimensions and Construction Method															
Dia. (in.)	From (ft.)	To (ft.)	Upper Enlarged Drillhole				Lower Open Bedrock		Geology Codes		8. Geology Type, Caving/Noncaving, Color, Hardness, etc...		From (ft.)	To (ft.)	
9	Surface	83	<u>Yes</u> Rotary - Mud Circulation				<u>No</u>		S	S-SAND		Surface	10		
6	83	181	<u>No</u> Rotary - Air				<u>Yes</u>		C	C-CLAY		10	60		
			<u>No</u> Rotary - Air & Foam				<u>No</u>		Z	Z-CLAY & GRAVEL		60	82		
			<u>No</u> Drill-Through Casing Hammer						L	H	L-LIMESTONE/DOLOMITE H-SHALEY		82	150	
			<u>No</u> Reverse Rotary						N	N-SANDSTONE		150	181		
			<u>No</u> Cable-tool Bit ___in. dia...				<u>No</u>								
			<u>No</u> Dual Rotary				<u>No</u>								
			<u>No</u> Temp. Outer Casing ___in. dia												
			<u>No</u> Removed? ___depth ft. (If NO explain on back side)												
6. Casing, Liner, Screen												9. Static Water Level		11. Well Is	
Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly			From (ft.)	To (ft.)	10 ft. below ground surface		12 in. above grade							
6	NEW BLACK STEEL PLAIN END WELDED ASTM A 53B 18.97# PER FT IPSCO PIPE			Surface	83	10. Pump Test		Developed ?		Yes					
						Pumping level 60 ft. below surface		Disinfected ?		Yes					
Dia. (in.)	Screen type, material & slot size			From (ft.)	To (ft.)	Pumping at 40 GP M for 2 Hrs.		Capped ?		Yes					
						Pumping Method ? Airlift									
7. Grout or Other Sealing Material												12. Notified Owner of need to fill & seal ?		No	
Method TREMIE PIPE - PUMPED												Filled & Sealed Well(s) as needed?		No	
Kind of Sealing Material			From (ft.)	To (ft.)	# Sacks Cement										
HIGH SOLIDS BENTONITE			Surface	83	4 S										
13. Constructor / Supervisory Driller				Lic #		Date Signed									
TLV				6378		03-23-2021									
Drill Rig Operator				Lic or Reg #		Date Signed									
KZ				7365		03-23-2021									

4a. Potential Contamination Sources

Is the well located in floodplain ? No

Type	Qualifier	Distance
Septic or Holding, or POWTS Tank	=	70

Comment:

YES IT IS PRIVATE POTABLE AND ITS A COMMERCIAL BUSINESS BUILDING

4/23/21 (DNR REVIEWER) SERVICE CATEGORY CHANGED TO NON-COMMUNITY, DUE TO INFORMATION PROVIDED THAT IT IS A COMMERCIAL BUSINESS BUILDING

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 03-23-2021

Created by: EVANDEYACHT

Updated On: 04-23-2021

Updated by: WELL PROCESS



ADF Break

1. Product and Company Identification

Product Name	ADF Break
Synonyms	Laundry Alkali
SDS Number	D26683
Company Identification	Wausau Chemical Corporation 9919 innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, light red
Odor	Slight alkaline
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); corrosive, irritant
GHS Classification	Corrosive to metals (Category 1) Acute toxicity, oral (Category 4) Skin corrosion (Category 1A) Serious eye damage (Category 1) Acute aquatic toxicity (Category 3)

Pictogram



Signal Word Danger

Hazard Statement(s)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.

Precautionary Statement(s)

P234	Keep only in original container.
P260	Do not breathe mists or vapors.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.



P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion	Harmful if swallowed.
Skin	Causes skin burns.
Eyes	Causes severe eye burns.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Potassium Hydroxide	1310-58-3	28
Sodium Silicate	1344-09-8	8
Soft Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Skin Contact	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None

Extinguishing Media

Suitable	Use foam, alcohol foam, carbon dioxide, dry chemical.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Avoid direct contact of this product with water since this can cause a violent exothermic reaction. Protective clothing and pressure demand, self-contained breathing apparatus should be worn by firefighters in areas where product is stored.



Unusual Fire & Explosion Hazards None known.

6. Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge to the environment must be avoided.

Spill Contain spillage. Neutralize remaining traces with any dilute organic acid (i.e. hydrochloric, sulfuric, nitric, phosphoric, or acetic acid). Then flush area with water followed by a liberal covering of sodium bicarbonate. All clean up material should then be placed in container for disposal according to local regulations.

7. Handling and Storage

Handling Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Storage Product can react violently with water, acids, and other substances. Product is corrosive to tin, aluminum, zinc, and alloys containing these metals and will react violently with these materials in powder form. Keep containers tightly closed in a dry and well-ventilated area.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Potassium Hydroxide	2 mg/m ³ – ceiling concentration	2 mg/m ³ – ceiling concentration
Sodium Silicate	Not established	Not established
Acid Red #14 Dye	Not established	Not established

Engineering Measures Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Respiratory Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eyes and Face Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.

Skin Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.

9. Physical and Chemical Properties

Appearance Clear, light red liquid

Odor Slight alkaline odor

pH > 12

Water Solubility Complete

Vapor Density (air = 1) Not established

Evaporation rate (butyl acetate = 1) Not established



Boiling Point (°F)	Not established
Freezing Point (°F)	~ -20 °F (-28.9 °C)
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.364
Vapor Pressure (mm Hg, 20 °C)	Not established
Volatile Organic (VOC) Content	Not applicable

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid		Contact with water.							
Materials to Avoid		Acids, aluminum, tin, zinc and alloys containing these materials.							
Decomposition Products		None							

11. Toxicological Information

Eye	Causes severe eye burns.
Potassium Hydroxide	Eyes - rabbit – corrosive to eyes – OECD test guideline 405
Sodium Silicate	Eyes – no data available
Acid Red #14 Dye	Eyes – no data available
Dermal	Causes skin burns.
Potassium Hydroxide	Dermal LD50 – no data available Skin corrosion/irritation: rabbit – severe skin irritation – 24 h
Sodium Silicate	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Acid Red #14 Dye	Dermal LD50 – no data available Skin corrosion/irritation: rabbit – non-irritant
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Potassium Hydroxide	Inhalation LC50 – no data available
Sodium Silicate	Inhalation LC50 – no data available
Acid Red #14 Dye	Inhalation LC50 – no data available
Oral	May be harmful if swallowed.
Potassium Hydroxide	Oral LD50 – rat – 333 mg/kg
Sodium Silicate	Oral LD50 – no data available
Acid Red #14 Dye	Oral LD50 – no data available

Potential Chronic Health Effects

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	No data available



12. Ecological Information

Biodegradability	No data available
Ecotoxicity	Toxicity to fish: LC50 – <i>Gambusia affinis</i> (mosquito fish) – 80 mg/l - 96 h (potassium hydroxide) An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted hazardous waste management facility following all local, state, and federal regulations.
RCRA	The RCRA waste code of D002 (corrosive waste) should be assigned in discussion between the user, the producer, and the waste disposal company.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Corrosive Liquid, Basic, Inorganic, N.O.S. (Potassium Hydroxide)	Same
Hazard Class	8	Same
Identification Number	UN3266	Same
Packing Group	II	Same
Reportable Quantities	Not applicable	RQ=1000 lbs.
Placards/Labels	Corrosive	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. Potassium Hydroxide CERCLA reporting amount – 1000 lbs.
SARA Title III Section 313	This product does not require reporting.
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. Potassium Hydroxide
TSCA – Toxic Substances Control Act	All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.
RCRA – Resource Conservation and Recovery Act	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal. Waste Code D002 - Corrosivity
State Regulations	
Massachusetts	RTK Substances: The following components are listed: Potassium Hydroxide (CAS #1310-58-3)



New Jersey **RTK Substances:** The following components are listed: Potassium Hydroxide (CAS #1310-58-3), Silicic acid, sodium salt (CAS #1344-09-8), Acid Red #14 Dye (CAS #3567-69-9)

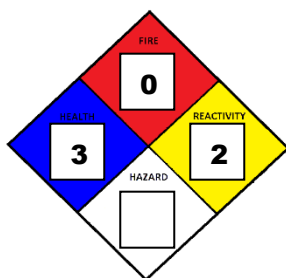
Pennsylvania **RTK Substances:** The following components are listed: Potassium Hydroxide (CAS #1310-58-3), Silicic acid, sodium salt (CAS #1344-09-8), Acid Red #14 Dye (CAS #3567-69-9)

California **Proposition 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue 11/22/2013 | 4/29/2015-updated GHS classification and hazard/precautionary statements, section 2 | 2/13/2019-added precautionary code P260, section 2 – updated RCRA information, sections 13 & 15 (ST) | 10/08/2019 – updated TSCA statement, section 15 (RP) | 12/30/2020-updated address, section 1 (ST)

NFPA



HMIS

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	2
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.




ADF Detergent

1. Product and Company Identification

Product Name	ADF Detergent
Synonyms	None
SDS Number	D26557
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, orange
Odor	Characteristic
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); irritant
GHS Classification	Skin irritation (Category 2) Eye irritation (Category 2A)
Pictogram	
Signal Word	Warning
Hazard Statement(s)	
H315	Causes skin irritation.
H319	Causes serious eye irritation.
Precautionary Statement(s)	
P264	Wash skin thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Potential Acute Health Effects

Inhalation	Mist or vapors may cause irritation of the respiratory system.
Ingestion	Gastrointestinal discomfort may occur with these symptoms: nausea, vomiting, lethargy, or diarrhea.
Skin	May cause skin irritation, especially on repeated contact.
Eyes	Causes eye irritation.

See section 11 for more detailed information on health effects and symptoms



3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Alcohol Ethoxylate	68439-46-3	13
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Take off contaminated clothing and shoes and wash before reuse. Wash off with soap and plenty of water.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Drink large amounts of water and induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None
<u>Extinguishing Media</u>	
Suitable	Water, fog, alcohol foam, carbon dioxide, or dry chemical.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear self-contained breathing apparatus for firefighting.
Unusual Fire & Explosion Hazards	None known.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Spill	Contain spillage, and then place in container for disposal according to local regulations.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Store at ambient temperatures.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Alcohol Ethoxylate	Not established	Not established
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when	



	handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.
Eyes and Face	Wear chemical safety goggles while handling this product.
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.

9. Physical and Chemical Properties

Appearance	Clear, orange liquid
Odor	Characteristic
pH	8.0 – 8.5
Water Solubility	Complete
Vapor Density (air = 1)	Not determined
Evaporation rate (butyl acetate = 1)	Not applicable
Boiling Point (°F)	Not determined
Freezing Point (°F)	About 25 °F (-3.9 °C)
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.012
Vapor Pressure (mm Hg, 20 °C)	Not determined
Volatile Organic (VOC) Content	None

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	None known.								
Materials to Avoid	None known.								
Decomposition Products	Not known.								

11. Toxicological Information

Eye	Causes eye irritation.
Alcohol Ethoxylate	Eyes - rabbit – severe irritation
Dermal	May cause skin irritation, especially on repeated contact.
Alcohol Ethoxylate	Dermal LD50 – rat – > 4000 mg/kg Skin corrosion/irritation: rabbit – Draize – 0.6 – 4 h
Inhalation	Mist or vapors may cause irritation of the respiratory system.
Alcohol Ethoxylate	Inhalation LC50 – no data available
Oral	Gastrointestinal discomfort may occur with these symptoms: nausea, vomiting, lethargy, or diarrhea.
Alcohol Ethoxylate	Oral LD50 – rat – 2700 mg/kg



Potential Chronic Health Effects

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.
Mutagenicity	D&C Orange #4 – mutagenic for mammalian somatic cells
Teratogenicity	No data available
Fertility Effects	No data available

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	No data available

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Not dangerous goods	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	None	Same
Placards/Labels	Not applicable	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. No component requires reporting
SARA Title III Section 313	This product does not require reporting.
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. No component listed
TSCA – Toxic Substances Control Act	All components of this product are listed on the Toxic Substances Control Act Inventory or are excluded from listing requirements.
RCRA – Resource Conservation and Recovery Act	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.



No component listed

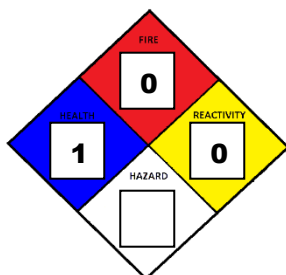
State Regulations

Massachusetts **RTK Substances:** The following components are listed: no component listed
 New Jersey **RTK Substances:** The following components are listed: no component listed
 Pennsylvania **RTK Substances:** The following components are listed: no component listed
 California **Proposition 65:** This product contains trace amounts of a chemical known to the State of California to cause both cancer and birth defects, or any other reproductive harm.
 Ethylene Oxide (CAS #75-21-8)

16. Other Information

Date of Issue 5/30/2014 | 12/28/2017-updated precautionary statements, section 2 – modified ingredient list, sections 3 & 11 (ST) | 09/26/2019 – updated TSCA statement, section 15 (RP) | 12/30/2020-updated address, section 1 (ST)

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.
 The customer is responsible for determining the PPE code for this material.

Notice to Reader

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ADF Oxygen Bleach

1. Product and Company Identification

Product Name	ADF Oxygen Bleach
Synonyms	Non-chlorine laundry Bleach
SDS Number	D27183
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, light yellow
Odor	Odorless
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); oxidizer, irritant.
Target Organs	Eyes, skin, respiratory system
GHS Classification	Oxidizing liquids (Category 3) Skin irritation (Category 3) Eye irritation (Category 2B)
Pictogram	Two GHS pictograms in red diamond shapes: one showing a flame over a circle (Oxidizing) and one showing an exclamation mark (Health Hazard).
Signal Word	Warning
Hazard Statement(s)	
H272	May intensify fire; oxidizer.
H316	Causes mild skin irritation.
H320	Causes eye irritation.
Precautionary Statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing/ combustible materials.
P221	Take any precautions to avoid mixing with combustibles.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P370 + P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish.
P501	Dispose of contents/ container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation	May cause respiratory tract irritation if inhaled.
Ingestion	Not expected to be harmful if swallowed.



Skin May cause skin irritation on repeated or prolonged contact.
Eyes May cause eye irritation.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Hydrogen Peroxide	7722-84-1	7.7
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if eye irritation persists.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if skin irritation persists.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. If it is suspected that dust, vapor, mist, or gas are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None

Extinguishing Media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Not Suitable	Not available
Special Fire-fighting Procedures & Hazards	Wear self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.
Unusual Fire & Explosion Hazards	Explosion hazard is high for unvented or partially vented containers in a fire. Decomposition of hydrogen peroxide creates oxygen that enhances a fire or explosion hazard. Hydrogen peroxide is a strong oxidizer that can initiate spontaneous combustion of paper, wood, cloth, and other organic materials. Ignition can be very rapid or can be delayed for up to several hours.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Spill	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.



7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition - No smoking. Normal measures for preventive fire protection.
Storage	Keep container tightly closed in a dry and well-ventilated place out of direct sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Hydrogen Peroxide	1 ppm (1.4 mg/m ³)	1 ppm (1.4 mg/m ³)
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	
Eyes and Face	Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.	
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.	

9. Physical and Chemical Properties

Appearance	Clear, liquid
Odor	Odorless
pH	Not determined
Water Solubility	Complete
Vapor Density (air = 1)	Not determined
Evaporation rate (butyl acetate = 1)	Not determined
Boiling Point (°F)	212 °F (100 °C)
Freezing Point (°F)	Not determined
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.057
Vapor Pressure	Not determined
Volatile Organic (VOC) Content	Not applicable

10. Stability and Reactivity

Stable: X	Unstable:	Hazardous Polymerization:	Occurs:	Does Not Occur: X
Conditions to Avoid	Excessive heat or contamination of any kind.			
Materials to Avoid	Heavy metals and their salts. Reducing agents, strong oxidizers, alkalis, and particulate solids. Any organic material. All of these will cause decomposition and formation of oxygen.			
Decomposition Products	Oxygen, steam, peroxide vapor, and heat.			



11. Toxicological Information

Eye	Causes eye burns.
Hydrogen Peroxide	No data available
Dermal	May be harmful if absorbed through skin. Causes skin burns.
Hydrogen Peroxide	LD50 – 4060 mg/kg – rat
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Hydrogen Peroxide	LC50 – 2000 mg/kg (4 hr.) - rat
Oral	Toxic if swallowed.
Hydrogen Peroxide	LD50 – 2000 mg/kg - mouse

Potential Chronic Health Effects

Carcinogenicity	Classified A3 (proven for animal) by ACGIH. Classified Group 3 (not classifiable for human) by IARC.
Mutagenicity	Mutagenic for mammalian somatic cells.
Teratogenicity	No data available
Fertility Effects	No data available
Target Organs	Eyes, skin, respiratory system

12. Ecological Information

Biodegradability	Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Degrades in the atmosphere within the light spectrum with hydroxyl radicals in the gas phase and subsequent photolysis.
Ecotoxicity	Toxicity to fish: LC50 – Fathead minnow – 16.4 mg/l - 96 h Toxicity to aquatic invertebrates: EC50 – Daphnia magna (water flea) – 7.7 mg/l – 24 h

13. Disposal Considerations

Waste Disposal	Dispose of in accordance with all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

<u>US DOT 49 CFR 172.101</u>	<u>Non-bulk Shipments (Drums/Totes)</u>	<u>Bulk Shipments (Tank Trucks/Rail Cars)</u>
Proper Shipping Name	Not DOT regulated	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Not applicable	Same



15. Regulatory Information

**CERCLA / SARA
Emergency Reporting** A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.

Product does not require reporting in this concentration

SARA Title III Section 313 This product does not require reporting.

**Clean Water Act (CWA)
Section 311** The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.

Product not listed

**TSCA – Toxic Substances
Control Act** All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.

**RCRA – Resource
Conservation and Recovery
Act** The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

No components listed

State Regulations

Massachusetts **RTK Substances:** The following components are listed: Hydrogen Peroxide

New Jersey **RTK Substances:** The following components are listed: Hydrogen Peroxide

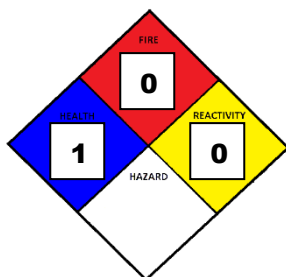
Pennsylvania **RTK Substances:** The following components are listed: Hydrogen Peroxide

California **Proposition 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue 11/13/2013 | 2/1/2019-accuracy review (ST) | 10/02/2019 – updated TSCA statement, section 15 (RP) | 12/30/2020-updated address, section 1 (ST)

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

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kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.




ADF Softener

1. Product and Company Identification

Product Name	ADF Softener
Synonyms	Laundry Softener
MSDS Number	D24910
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Light blue, hazy
Odor	Perfume
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); irritant
GHS Classification	Eye irritation (Category 2A) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1)
Pictogram	
Signal Word	Warning
Hazard Statement(s)	
H319	Causes serious eye irritation.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statement(s)	
P264	Wash thoroughly after handling.
P273	Avoid release to the environment
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P501	Dispose of contents/container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation	Mist or vapors can cause irritation of the respiratory system.
Ingestion	Corrosive to the mouth, esophagus, and mucous membranes.
Skin	May cause irritation on repeated contact.
Eyes	Causes serious eye irritation.

See section 11 for more detailed information on health effects and symptoms



3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	68410-69-5	7 - 10
Isopropyl Alcohol	67-63-0	1 - 2
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if irritation persists.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if irritation persists.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink large amounts of water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None
<u>Extinguishing Media</u>	
Suitable	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear chemical protective clothing and self-contained breathing apparatus for firefighting.
Unusual Fire & Explosion Hazards	None known.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge to the environment must be avoided.
Spill	Contain spillage, and then place in container for disposal according to local regulations.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Store at ambient temperatures.



8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	Not available	Not available
Isopropyl Alcohol	200 ppm – TWA	400 ppm - TWA
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	
Eyes and Face	Wear chemical safety goggles while handling this product.	
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.	

9. Physical and Chemical Properties

Appearance	Light blue, hazy liquid
Odor	Perfume
pH	7.0
Water Solubility	Complete
Vapor Density (air = 1)	Not determined
Evaporation rate (butyl acetate = 1)	Not determined
Boiling Point (°F)	184 °F (84.4 °C)
Freezing Point (°F)	Not determined
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.040
Vapor Pressure (mm Hg, 20 °C)	Not determined
Volatile Organic (VOC) Content	1.1%

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	None known.								
Materials to Avoid	None known.								
Decomposition Products	Toxic gases can form at extremely high temperatures								



11. Toxicological Information

Eye	Causes serious eye irritation.
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	Eyes – no data available
Isopropyl Alcohol	Eyes – rabbit – eye irritation – 24 h
Dermal	May cause irritation on repeated contact.
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	Dermal LD50 – rat – > 2000 mg/kg Skin corrosion/irritation: no data available
Isopropyl Alcohol	Dermal LD50 – rabbit – 12,800 mg/kg Skin corrosion/irritation: rabbit – mild skin irritation
Inhalation	Mist or vapors can cause irritation of the respiratory system.
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	Inhalation LC50 – no data available
Isopropyl Alcohol	Inhalation LC50 – rat – 16,000 ppm
Oral	Corrosive to the mouth, esophagus, and mucous membranes.
Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate	Oral LD50 – rat – > 5000 mg/kg
Isopropyl Alcohol	Oral LD50 – rat – 5045 mg/kg

Potential Chronic Health Effects

Carcinogenicity	(Isopropyl Alcohol) IARC: Group 3: Not classifiable as to its carcinogenicity to humans.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	No data available

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	Toxicity to fish: LC50 – Fish – 0.62 mg/l - 96 h (Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate) LC50 – Pimephales promelas (fathead minnow) – 9640 mg/l – 96 h (isopropyl alcohol) Toxicity to aquatic invertebrates: EC50 – Daphnia magna (water flea) – 0.3 mg/l - 48 h (Methyl tallow diethylenetriamine condensate, polyethoxylated, methyl sulfate) EC50 – Daphnia magna (water flea) – 5102 mg/l – 24 h (isopropyl alcohol)



An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Not DOT regulated	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Not applicable	Same

15. Regulatory Information

**CERCLA / SARA
Emergency Reporting**
 A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.

No component requires reporting

SARA Title III Section 313
 This product does not require reporting.

**Clean Water Act (CWA)
Section 311**
 The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.

Product not listed

**TSCA – Toxic Substances
Control Act**
 All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.

**RCRA – Resource
Conservation and Recovery
Act**
 The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

No components listed

State Regulations

Massachusetts
RTK Substances: The following components are listed: Isopropyl Alcohol (CAS #67-63-0)

New Jersey
RTK Substances: The following components are listed: Isopropyl Alcohol (CAS #67-63-0)

Pennsylvania
RTK Substances: The following components are listed: Isopropyl Alcohol (CAS #67-63-0)

California
Proposition 65: WARNING! This product contains trace amounts of a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm:
 Ethylene Oxide (CAS #75-21-8)

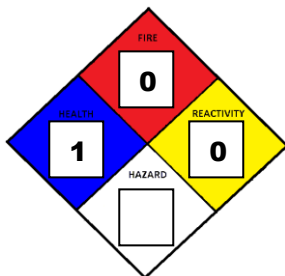


1,4-dioxane (CAS #123-91-1)
Methanol (CAS #67-56-1)

16. Other Information

Date of Issue 5/14/2015 | 5/26/2015-updated ingredients list, section 3 | 8/13/2019-updated TSCA statement, section 15 (ST) | 12/30/2020-updated address, section 1 (ST)

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.



ADF Sour

1. Product and Company Identification

Product Name	ADF Sour
Synonyms	Laundry sour
MSDS Number	D24911
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid (fuming)
Color	Clear, light blue
Odor	Pungent, burning, irritating
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); corrosive, toxin
GHS Classification	Acute toxicity, oral (Category 4) Acute toxicity, dermal (Category 3) Skin corrosion (Category 1A) Serious eye damage (Category 1)

Pictogram



Signal Word Danger

Hazard Statement(s)

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.

Precautionary Statement(s)

P234	Keep only in original container.
P260	Do not breathe mists or fumes.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.



P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion Harmful if swallowed.
Skin Toxic if absorbed through skin. Causes skin burns.
Eyes Causes severe eye burns.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Hydrofluorosilicic Acid	16961-83-4	5-6
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Skin Contact Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician immediately.
Inhalation If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product Not flammable or combustible
Flash Point (Method) None
Auto Ignition Temperature None

Extinguishing Media

Suitable Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Not Suitable No data available
Special Fire-fighting Procedures & Hazards Use a NIOSH approved self-contained acid suit. Keep containers cool with water using fog nozzles to prevent decomposition above 227 °F (108.3 °C).
Unusual Fire & Explosion Hazards Reacts with metals to form flammable and explosive hydrogen gas. Above 227 °F (108.3 °C), decomposition occurs to form toxic and corrosive fumes of fluorides.

6. Accidental Release Measures

Personal Precautions Use personal protective equipment. Do not wear contact lenses when handling this material. Avoid breathing vapors, mist or gas. Use a NIOSH approved respirator for



fumes. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge to the environment must be avoided.
Spill	Contain spillage, and then place in container for disposal according to local regulations. Provide adequate ventilation and use NIOSH approved respirator for fumes.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Store at ambient temperatures.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Hydrofluorosilicic Acid	Not available	2.5 mg/m ³ – TWA
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. For exposure above 20 ppm, use a self-contained breathing apparatus.	
Eyes and Face	Wear tight-fitting chemical splash goggles while handling this product. Wear a face shield to further protect against eye/face contact with splashing or spraying liquid or airborne material. Contact lenses should not be worn.	
Skin	Prevent contact with this product. Wear gloves and protective clothing. Protective gloves: gauntlet-type, neoprene, nitrile.	

9. Physical and Chemical Properties

Appearance	Clear, light blue fuming liquid
Odor	Pungent, burning, irritating
pH	1.2 (1% solution)
Water Solubility	Complete
Vapor Density (air = 1)	Not available
Evaporation rate (butyl acetate = 1)	Not available
Boiling Point (°F)	222 °F (105.6 °C)
Freezing Point (°F)	-4 °F (-20 °C)
Specific Gravity (H ₂ O = 1)	1.234 @ 77 °F (25 °C)
Vapor Pressure (mm Hg, 20 °C)	24
Volatile Organic (VOC) Content	None

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	Temperatures above 227 °F (108.3 °C).								



Materials to Avoid	Strong alkalis, strong acids, hypochlorites, metal, glass, stoneware.
Decomposition Products	Hazardous, toxic, and corrosive fumes of hydrogen fluoride, silica tetrafluoride, and hydrogen gas can form above 227 °F (108.3 °C) due to decomposition.

11. Toxicological Information

Eye	Causes severe eye burns.
Hydrofluorosilicic Acid	Eyes – no data available
Dermal	Toxic if absorbed through skin. Causes skin burns.
Hydrofluorosilicic Acid	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Inhalation	Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Hydrofluorosilicic Acid	Inhalation LC50 – no data available
Oral	Harmful if swallowed.
Hydrofluorosilicic Acid	Oral LD50 – rat – 430 mg/kg

Potential Chronic Health Effects

Carcinogenicity	IARC: Group 3: Not classifiable as to its carcinogenicity to humans.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	No data available

Exposure Signs/Symptoms

Acute: Liquid or vapors can cause severe irritation and burns that may not be apparent for hours. Can cause severe irritation to the lungs, nose, and throat. If swallowed, can cause severe damage to the throat and stomach.

Chronic: Prolonged exposure can result in bone changes, corrosive effect on mucous membranes including ulceration of the nose, throat, and bronchial tubes, cough, shock, pulmonary edema, fluorosis, coma, and death.

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	No data available

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

<u>US DOT 49 CFR 172.101</u>	<u>Non-bulk Shipments (Drums/Totes)</u>	<u>Bulk Shipments (Tank Trucks/Rail Cars)</u>
Proper Shipping Name	Corrosive Liquid, Acidic, Inorganic, N.O.S. (Fluorosilicic Acid)	Same



Hazard Class	8	Same
Identification Number	UN3264	Same
Packing Group	II	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Corrosive	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.

Product does not require reporting

SARA Title III Section 313 This product does not require reporting.

Clean Water Act (CWA) Section 311 The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.

Product not listed

TSCA – Toxic Substances Control Act All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.

RCRA – Resource Conservation and Recovery Act The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

No components listed

State Regulations

Massachusetts **RTK Substances:** The following components are listed: Hydrofluorosilicic Acid (CAS #16961-83-4)

New Jersey **RTK Substances:** The following components are listed: Hydrofluorosilicic Acid (CAS #16961-83-4)

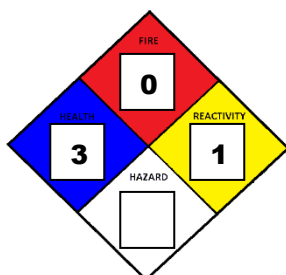
Pennsylvania **RTK Substances:** The following components are listed: Hydrofluorosilicic Acid (CAS #16961-83-4)

California **Proposition 65:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue 2/17/2015 | 4/29/2015 | 9/10/2015 | 8/20/2019 -updated TSCA statement, section 15 (RP) | 12/30/2020-updated address, section 1 (ST)

NFPA





HMIS

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.



Blue Degreaser

1. Product and Company Identification

Product Name	Blue Degreaser
Synonyms	Alkaline All Purpose Cleaner
SDS Number	D24951
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, blue
Odor	Characteristic
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); corrosive
GHS Classification	Acute toxicity, oral (Category 4) Acute toxicity, inhalation (Category 4) Acute toxicity, dermal (Category 4) Skin irritation (Category 2) Serious eye damage (Category 1) Specific target organ toxicity – single exposure (Category 3 – respiratory) Acute aquatic toxicity (Category 3)

Pictogram



Signal Word

Danger

Hazard Statement(s)

H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

Precautionary Statement(s)

P261	Avoid breathing fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P312	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for



	breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation	May be harmful if inhaled. Mist can cause irritation of the respiratory system.
Ingestion	May be harmful if swallowed. Corrosive to mouth, esophagus and mucous membranes.
Skin	May be harmful if absorbed through skin. Can cause severe skin irritation on repeated and/or prolonged contact.
Eyes	Causes severe eye burns.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Glycol Ether EB	111-76-2	10-15
Tetrapotassium Pyrophosphate	7320-34-5	2-4
Dodecylbenzenesulphonic acid	27176-87-0	3-5
Potassium Hydroxide	1310.58-3	2-4
Ethoxylated Alcohols	68439-46-3	2-3
Sodium Metasilicate	6834-92-0	1-2
Monoethanolamine	141-43-5	1-2
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if irritation persists.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None



Auto Ignition Temperature None

Extinguishing Media

Suitable	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear self-contained breathing apparatus and chemical protective clothing for firefighting.
Unusual Fire & Explosion Hazards	None known.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge to the environment must be avoided.
Spill	Contain spillage, and then place in container for disposal according to local regulations.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Glycol Ether EB	20 ppm – TWA	25 ppm – TWA
Tetrapotassium Pyrophosphate	Not established	Not established
Dodecylbenzenesulphonic acid	Not established	Not established
Potassium Hydroxide	2 mg/m ³ – ceiling concentration	2 mg/m ³ – ceiling concentration
Ethoxylated Alcohols	Not established	Not established
Sodium Metasilicate	Not established	Not established
Monoethanolamine	3 ppm – TWA	3 ppm – TWA
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	
Eyes and Face	Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.	
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.	



9. Physical and Chemical Properties

Appearance	Clear, blue liquid
Odor	Characteristic
pH	13 – 13.5
Water Solubility	Complete
Vapor Density (air = 1)	Not established
Evaporation rate (butyl acetate = 1)	Same as water
Boiling Point (°F)	Over 215 °F (101.7 °C)
Freezing Point (°F)	About -5 °F (-20.6 °C)
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.050
Vapor Pressure (mm Hg, 20 °C)	Not known
Volatile Organic (VOC) Content	10.5%

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	None known.								
Materials to Avoid	Strong oxidizers.								
Decomposition Products	Sulfur dioxide, hydrogen sulfide.								

11. Toxicological Information

Eye	Causes severe eye burns.
Glycol Ether EB	Eyes - rabbit – moderate eye irritation – 24 h
Tetrapotassium Pyrophosphate	Eyes – rabbit – moderate eye irritation
Dodecylbenzenesulphonic acid	Eyes – no data available
Potassium Hydroxide	Eyes – rabbit – corrosive to eyes
Ethoxylated Alcohols	Eyes – no data available
Sodium Metasilicate	Eyes – no data available
Monoethanolamine	Eyes – rabbit – severe eye irritation
Dermal	May be harmful if absorbed through skin. Can cause severe skin irritation on repeated and/or prolonged contact.
Glycol Ether EB	Dermal LD50 – rabbit – 220 mg/kg Skin corrosion/irritation: rabbit – open irritation test
Tetrapotassium Pyrophosphate	Dermal LD50 – rabbit – > 4640 mg/kg Skin corrosion/irritation: moderate skin irritation
Dodecylbenzenesulphonic acid	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Potassium Hydroxide	Dermal LD50 – no data available Skin corrosion/irritation: rabbit – severe skin irritation – 24 h
Ethoxylated Alcohols	Dermal LD50 – no data available Skin corrosion/irritation: no data available



Sodium Metasilicate	Dermal LD50 – no data available
	Skin corrosion/irritation: rabbit – severe skin irritation – 24 h
Monoethanolamine	Dermal LD50 – rabbit – 1015 mg/kg
	Skin corrosion/irritation: no data available
Inhalation	May be harmful if inhaled. Mist can cause irritation of the respiratory system.
Glycol Ether EB	Inhalation LC50 – rat – 450 ppm – 4 h
Tetrapotassium Pyrophosphate	Inhalation LC50 – no data available
Dodecylbenzenesulphonic acid	Inhalation LC50 – no data available
Potassium Hydroxide	Inhalation LC50 – no data available
Ethoxylated Alcohols	Inhalation LC50 – no data available
Sodium Metasilicate	Inhalation LC50 – no data available
Monoethanolamine	Inhalation LC50 – no data available
Oral	May be harmful if swallowed. Corrosive to mouth, esophagus and mucous membranes.
Glycol Ether EB	Oral LD50 – rat – 470 mg/kg
Tetrapotassium Pyrophosphate	Oral LD50 – no data available
Dodecylbenzenesulphonic acid	Oral LD50 – no data available
Potassium Hydroxide	Oral LD50 – rat – 333 mg/kg
Ethoxylated Alcohols	Oral LD50 – no data available
Sodium Metasilicate	Oral LD50 – rat – 1153 mg/kg
Monoethanolamine	Oral LD50 – rat – 1720 mg/kg

Potential Chronic Health Effects

Carcinogenicity	IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (Glycol Ether EB) No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by ACGIH, NTP, or OSHA.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	Reproductive toxicity – rat – oral: Effects on newborn – stillbirth, live birth index, weaning or lactation index (Sodium Metasilicate)

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	Toxicity to fish: LC50 - other fish - 220 mg/l - 96 h (glycol ether EB) LC50 - Gambusia affinis (Mosquito fish) - 80 mg/l - 96 h (potassium hydroxide) LC50 - Pimephales promelas (fathead minnow) - 227 mg/l - 96 h – (monoethanolamine) Toxicity to aquatic invertebrates: EC50 - Daphnia magna (Water flea) - 1,815 mg/l - 24 h (glycol ether EB)



EC50 - Daphnia magna (Water flea) - 65 mg/l - 48 h (monoethanolamine)

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	The RCRA waste code of D002 (corrosive waste) should be assigned in discussion between the user, the producer, and the waste disposal company.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

<u>US DOT 49 CFR 172.101</u>	<u>Non-bulk Shipments (Drums/Totes)</u>	<u>Bulk Shipments (Tank Trucks/Rail Cars)</u>
Proper Shipping Name	Not DOT regulated	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Not applicable	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. Dodecylbenzenesulphonic acid CERCLA reporting amount – 1000 lbs. Potassium Hydroxide CERCLA reporting amount – 1000 lbs.
SARA Title III Section 313	This product does not require reporting.
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. Dodecylbenzenesulphonic acid Potassium Hydroxide
TSCA – Toxic Substances Control Act	All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.
RCRA – Resource Conservation and Recovery Act	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal. Waste Code D002 - Corrosivity
State Regulations	
Massachusetts	RTK Substances: The following components are listed: Glycol Ether EB (CAS #111-76-2), Dodecylbenzenesulphonic acid (CAS #27176-87-0), Potassium Hydroxide (CAS #1310-58-3), Monoethanolamine (CAS #141-43-5)
New Jersey	RTK Substances: The following components are listed: Glycol Ether EB (CAS #111-76-



2), Tetrapotassium Pyrophosphate (CAS #7320-34-5), Dodecylbenzenesulphonic acid (CAS #27176-87-0), Potassium Hydroxide (CAS #1310-58-3), Sodium Metasilicate (CAS #6834-92-0), Monoethanolamine (CAS #141-43-5)

Pennsylvania

RTK Substances: The following components are listed: Glycol Ether EB (CAS #111-76-2), Tetrapotassium Pyrophosphate (CAS #7320-34-5), Dodecylbenzenesulphonic acid (CAS #27176-87-0), Potassium Hydroxide (CAS #1310-58-3), Sodium Metasilicate (CAS #6834-92-0), Monoethanolamine (CAS #141-43-5)

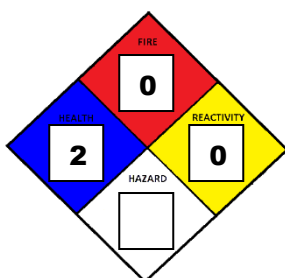
California

Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue 10/3/2014 | 1/24/2017-updated formulation, multiple sections (ST) | 09/20/19 – updated TSCA statement, section 15 (RP) | 12/2/2020-updated address information, section 1 (ST)

NFPA



HMIS

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.

MATERIAL SAFETY DATA SHEET

PRODUCT _____

Buff

Laidlaw

HMIS HAZARD RATINGS[†]

Health 1
Flammability 0
Physical hazards 1

Adco™

SECTION 1: PRODUCT INFORMATION

Manufacturer: Pariser Industries, Inc., 91 Michigan Avenue, Paterson, NJ 07503

EMERGENCY TELEPHONE NUMBERS: CHEMTREC (800) 424-9300 24 HRS 7 DAYS A WEEK; ADCO (800) 821-7556 (8-5 M-F)

Intended Product Use: Solvent additive

Synonyms: _____

SECTION 2: HAZARDOUS INGREDIENTS

Chemical Name	%	CAS #	OSHA PEL	LD 50
None				

SECTION 3: PHYSICAL DATA

Appearance: <u>White powder</u>	Boiling Point: <u>No data</u>
Odor: <u>Sweet mint</u>	Solubility in Water: <u>Soluble</u>
Specific Gravity (20° C): <u>2.15</u>	Vapor Pressure (mm Hg): <u>No data</u>
pH: <u>No data</u>	Vapor Density: <u>No data</u>

SECTION 4: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method)(°F): <u>N/A</u>	Upper Flammable Limit: <u>N/A</u>
Extinguishing Media:	Lower Flammable Limit: <u>N/A</u>
Special Fire Fighting Procedures:	<u>For fires involving this product, water spray, carbon dioxide, foam or dry chemical may be used.</u>
	<u>Wear NIOSH approved self-contained breathing apparatus when either in confined areas or exposed to combustion products.</u>
	<u>Use water to cool fire-exposed containers.</u>
Unusual Fire and Explosion Hazards:	<u>Firefighters should wear self-contained positive-pressure breathing apparatus and avoid skin contact.</u>

SECTION 5: REACTIVITY DATA

Stability: <u>Stable</u>	Conditions to Avoid: <u>Avoid temperatures above 220°F</u>
Incompatibility (materials to avoid):	<u>Contact with acids will release carbon dioxide gas. When mixed with lime dust and water, corrosive caustic soda may be produced.</u>
Hazardous Decomposition Products:	<u>Heating above 220°F may cause dangerous levels of carbon dioxide gas to be present in a confined space. Yields sodium oxide if exposed to temperatures above 1564°F. Avoid inhalation, eye and skin contact with sodium oxide.</u>
Hazardous Polymerization:	<u>Will not occur</u>

SECTION 6: HEALTH HAZARD DATA

Toxicity (Estimated): <u>Slight</u>	
Effects of Overexposure:	<u>Acute: Dust may cause mild irritation in eyes and on skin. May aggravate existing skin and/or eye conditions on contact. Large ingested doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.</u>
	<u>Chronic: None known.</u>
Carcinogenicity:	<u>None of the ingredients of this mixture have been identified as a carcinogen or probable carcinogen by ACGIH, IARC, or OSHA.</u>

[†]Hazard ratings and other information are based on latest available information from tests on product or ingredients of mixtures. The data and evaluations are accurate to the best of ADCO's knowledge. No guarantee or liability is expressed or implied.

EXPOSURE LIMITS See Section 2	IRRITANCY OF PRODUCT Slight eye and skin	SENSITIZATION TO PRODUCT None reported	CARCINOGENICITY No components are listed by ACGIH, IARC, or OSHA
TERATOGENICITY No effects reported	REPRODUCTIVE TOXICITY No effects reported	MUTAGENICITY None reported	SYNERGISTIC PRODUCTS None reported

Based on known toxicity of components. No test data available on mixture.

SECTION 7: PREVENTATIVE MEASURES

SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH/MSHA approved respirator for particulates. Local exhaust, ventilate as required.

Ventilation: General mechanical ventilation or local exhaust should be suitable to keep vapor concentrations below TLV. Ventilation equipment should be explosion proof.

Protective Gloves: Normal work gloves are adequate.

Eye Protection: Eye glasses or goggles should be worn in dusty areas.

Other protection equipment ordinarily not needed. Availability of eye washes and adequate ventilation in work areas recommended.

STORAGE AND HANDLING:

Do not puncture, drag or slide containers. Do not smoke in any chemical handling or storage area. Wash hands before eating. Store in a cool, dry and well-ventilated area. Protect from humidity. Keep containers tightly closed. Store away from incompatible materials.

SPILL OR LEAK PROCEDURES:

If material is spilled, sweep up into suitable disposal drum and flush area with water.

WASTE DISPOSAL METHOD:

If material cannot be salvaged, the preferred method of disposal is in a secure chemical landfill in accordance with all local, state, and federal environmental regulations.

RECOMMENDED PRECAUTIONARY LABELING:

CAUTION:

Use with adequate ventilation. Avoid prolonged breathing of dust. Avoid contact with skin and eyes.

FIRST AID:

Flush eyes with water for 15 minutes, holding lids open. Rinse skin with plenty of water. Wash contaminated clothing before reuse. If overexposed to dust, remove to fresh air. If ingested, give large quantities of water. Do NOT induce vomiting. Get medical attention for eye contact or ingestion.

KEEP OUT OF REACH OF CHILDREN. DO NOT TAKE INTERNALLY.

This product is intended for professional use only by trained personnel.

SECTION 8: FIRST AID

Inhalation: If overexposed to dust, remove to fresh air. Get medical attention if breathing becomes difficult.

Eyes: Flush with water for 15 minutes, holding lids open. Get medical assistance immediately.

Skin: Rinse with plenty of water. Get medical attention if irritation persists. Wash contaminated clothing before reuse.

Ingestion: Give large quantities of water. Do NOT induce vomiting. Get medical assistance. Do not give anything by mouth to an unconscious person.

IF SYMPTOMS PERSIST, SEEK MEDICAL ASSISTANCE

SECTION 9: SARA TITLE III

NOTE: This product does not contain any components which are under the reporting requirements of SARA Title III, Section 313.

SECTION 10: PREPARATION DATE

This information is provided for guidance only based on information we have compiled. No guarantee of accuracy or completeness is expressed or implied.

ADCO RESEARCH DEPARTMENT

Prepared by:

Julie D. Hirner

Julie D. Hirner

Date: April 22, 2010

Replaces MSDS of: January 30, 2008

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Clorosheen

OTHER MEANS OF IDENTIFICATION: Not applicable.

GENERAL USE: For professional drycleaning use only.

PRODUCT DESCRIPTION: Drycleaning Detergent

MANUFACTURER

Adco Professional Products LLC
1706 Ledo Rd.
Albany, GA 31707

Product Information: 800-323-7206 (USA
& Canada only)

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947 (USA & Canada
only) or 651-632-9272

Transportation Emergency: 800-424-9300 (USA &
Canada only) or 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Skin corrosion/Irritation: Category 2

Serious Eye Damage/Irritation: Category 2

GHS LABEL ELEMENTS

Symbol(s):



Signal Word: Warning

Hazard Statements:

H315 – Causes skin irritation.

H319 – Causes serious eye irritation.

Precautionary Statements:

P264 – Wash skin thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection/ face protection.

P302+P352 – IF ON SKIN: wash with plenty of soap and water.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 –IF eye irritation persists: Get medical advice/attention.

P362 – Take off contaminated clothing and wash before reuse.

P501 –Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards: Not available.

Unknown Acute Toxicity: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The specific identities of one or more components of this product are withheld as a trade secret.

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS</u>
Trade Secret #1	-	-
Trade Secret #2	-	-
Trade Secret #3	-	-
Trade Secret #4	-	-
Trade Secret #5	-	-
Trade Secret #6	-	-
Trade Secret #7	-	-

COMMENTS: None.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing. Wash with soap and water. Consult a physician if irritation persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove affected person to fresh air. If not breathing, give artificial respiration. Get medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Severe discomfort and irritation, redness, burning, tearing, pain, and defect of vision.

SKIN: Redness, irritation, burning, swelling, dermatitis.

SKIN ABSORPTION: Dermatitis, drying, itching, burning sensation.

INGESTION: Irritation of mouth, throat, and stomach. May cause nausea, vomiting, dizziness, and possible central nervous system effects.

INHALATION: Irritation of throat and lungs, central nervous system depression, nausea, headache, and dizziness.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not applicable.

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: No data available.

OTHERCONSIDERATIONS: Concentrated vapor can be ignited by high-intensity source.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spill with absorbent material and water, if necessary.

LARGE SPILL: Contain spill. Avoid breathing vapor. Clean up spills immediately with absorbent material, observing precautions in the Exposure Control/Personal Protection section (see section 8). Place absorbed material in closed containers for disposal (see section 13). Do not flush to sewer. Avoid contamination of ground and surface waters.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Not applicable.

HANDLING: Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in labeled, tightly sealed containers.

ELECTROSTATIC ACCUMULATION HAZARD: Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	<u>EXPOSURE LIMITS</u>					
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
(trade secret #1)	TWA	NE ^[1]			NE	
	STEL	NE			NE	
(trade secret #2)	TWA	NE			NE	
	STEL	NE			NE	
(trade secret #3)	TWA	NE			NE	
	STEL	NE			NE	
(trade secret #4)	TWA	NE			NE	
	STEL	NE			NE	
(trade secret #5)	TWA	NE			NE	
	STEL	NE			NE	
(trade secret #6)	TWA	NE			NE	
	STEL	NE			NE	
(trade secret #7)	TWA	NE			NE	
	STEL	NE			NE	

TABLE FOOTNOTES:

1. NE=Not established.

The specific identities of one or more components of this product are withheld as a trade secret.

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields, or goggles.

SKIN: Neoprene or Barrier™ gloves.

RESPIRATORY: None required under normal conditions.

PROTECTIVE CLOTHING: Where contact is likely, wear the appropriate chemical resistant equipment, which depending on circumstances may include gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Have eye wash station available. Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear.

PHYSICAL STATE: Liquid.

COLOR: Light yellow.

ODOR: Bland.

ODOR THRESHOLD: No data available.

pH: 5.5-6.5

FREEZING POINT: No data available.

INITIAL BOILING POINT: No data available.

FLASHPOINT: >230 (PM).

EVAPORATION RATE: No data available.

FLAMMABILITY (Solid, Gas): Not applicable, this product is a liquid at room temperature.

FLAMMABLE LIMITS: No data available.

VAPOR PRESSURE: No data available.

VAPOR DENSITY: Lighter than air.

RELATIVE DENSITY: 0.98

SOLUBILITY IN WATER: Insoluble.

PARTITION COEFFICIENT (Log K_{ow}): No data available.

AUTOIGNITION TEMPERATURE: Not available.

DECOMPOSITION TEMPERATURE: No data available.

VISCOSITY: No data available.

PERCENT VOLATILE: No data available.

10. STABILITY AND REACTIVITY

REACTIVITY: No

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Polymerization will not occur.

CONDITIONS TO AVOID: Storage at temperatures above 120°F

INCOMPATIBLE MATERIALS: Strong oxidizers or alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning produces toxic, irritating fumes.

11. TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Skin, eyes, inhalation.

ACUTE TOXICITY (ATE)

DERMAL LD₅₀: Insufficient data available.

ORAL LD₅₀: Insufficient data available.

INHALATION LC₅₀: Insufficient data available.

CHRONIC

TARGET ORGANS: Components of this product caused liver and kidney effects in lab animals; the relevance to humans is unknown.

SENSITIZATION: Insufficient data available.

CARCINOGENICITY:

IARC: Not listed as a carcinogen.

NTP: Not listed as a carcinogen.

OSHA: Not listed as a carcinogen.

OTHER: No data available.

OTHER: No data available.

REPRODUCTIVE EFFECTS: Insufficient data available.

MUTAGENICITY: None known.

SYNERGISTIC MATERIALS: None known.

POTENTIAL HEALTH EFFECTS

EYES: Causes serious eye irritation.

SKIN: Causes skin irritation.

SKIN ABSORPTION: Insufficient data available.

INGESTION: Harmful if swallowed. May be irritating to mouth, throat, and stomach.

ASPIRATION HAZARD: Insufficient data available.

INHALATION: Prolonged inhalation may be harmful.

MEDICAL CONDITIONS AGGRAVATED: Preexisting respiratory tract, skin, and eye disorders.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Components of this product are considered moderately toxic.

PERSISTENCE AND DEGRADABILITY: Insufficient data available.

BIOACCUMULATIVE POTENTIAL: No data available.

MOBILITY IN SOIL: No data available.

OTHER ADVERSE EFFECTS: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Recovered liquids may be sent to a licensed reclaimer or incineration facility. Contaminated material must be disposed of in a permitted waste management facility. Consult federal, state, and local authorities for approved procedures.

EMPTY CONTAINER: Not applicable.

RCRA/EPA WASTE INFORMATION: Contains no material listed by RCRA as a hazardous waste.

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)****PROPER SHIPPING NAME:** Not regulated.**OTHER SHIPPING INFORMATION:** Not applicable.**CANADA TRANSPORT OF DANGEROUS GOODS****PROPER SHIPPING NAME:** Not regulated.**OTHER SHIPPING INFORMATION:** Not applicable.**AIR (ICAO/IATA)****PROPER SHIPPING NAME:** Not regulated**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:****FIRE:** No. **PRESSURE GENERATING:** No. **REACTIVITY:** No. **ACUTE:** Yes.**CHRONIC:** No.**313 REPORTABLE INGREDIENTS:** None.**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)****CERCLA RQ:** Not applicable.**REPORTABLE SPILL QUANTITY:** Not applicable.**RCRA STATUS:** See section 13.**MEXICO**

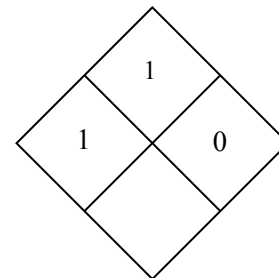
Not applicable.

STATE REGULATIONS**MASSACHUSETTS**

Contains no substances regulated by the Massachusetts Substance List.

CALIFORNIA**PROPOSITION 65 STATEMENT:** This product contains no ingredients known to the state of California to cause cancer, birth defects, or other reproductive harm.**16. OTHER INFORMATION**

HMIS RATINGS	
HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTION:	B

NFPA RATINGS**SDS Revision Date:** September 14, 2015



SAFETY DATA SHEET

BLUE CUBE OPERATIONS LLC

Product name: DOWPER™ Solvent

Issue Date: 05/10/2016

Print Date: 11/29/2016

BLUE CUBE OPERATIONS LLC encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWPER™ Solvent

Recommended use of the chemical and restrictions on use

Identified uses: Industrial solvent. As your supplier, we do NOT approve this product for direct sales to the general public. As your supplier, we do NOT recommend the use of this product in applications where: - soil or ground water contamination is likely (direct applications to the ground, sink drains, sewers, or septic tanks). - where over exposure is likely (small rooms or confined space, or where there would be inadequate ventilation). - where skin contact is likely (adhesive tape removal from skin or as hand cleaner to remove oils and greases). - where there is direct food contact. - where vapor concentrations would be in the flammable range. - where disposal of waste would pose an environmental or health risk. - where chemical reactivity poses a danger (contact with strong alkali, or in areas where welding is done).

COMPANY IDENTIFICATION

BLUE CUBE OPERATIONS LLC
2030 DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number:

+1 844-238-3445
INFO@OLINBC.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 1 800 424 9300

Local Emergency Contact: 1 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Skin irritation - Category 2

Skin sensitisation - Sub-category 1B

Carcinogenicity - Category 2

Specific target organ toxicity - single exposure - Category 3

Label elements
Hazard pictogramsSignal word: **WARNING!****Hazards**

Causes skin irritation.
May cause an allergic skin reaction.
May cause drowsiness or dizziness.
Suspected of causing cancer.

Precautionary statements**Prevention**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Tetrachloroethylene

This product is a substance.

Component**CASRN****Concentration**

Ethene, tetrachloro-

127-18-4

> 99.9 %

4. FIRST AID MEASURES

Description of first aid measures

General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. Alcohol consumed before or after exposure may increase adverse effects. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: Fire conditions may cause this product to decompose. Refer to section 10 - Thermal Decomposition.

Unusual Fire and Explosion Hazards: Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Do not use direct water stream. May spread fire. This material does not burn. Fight fire for other material that is burning. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Material will sink in water. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Small spills: Absorb with materials such as: Bentonite. Sawdust. Clay. Large spills: Contain spilled material if possible. Recover spilled material if possible. Collect in suitable and properly labeled containers. Suitable containers include: Metal drums. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not swallow. Avoid breathing vapor. Avoid contact with skin and clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Do not enter confined spaces unless adequately ventilated. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Store under cover in a dry, clean, cool, well ventilated place away from sunlight. Do not handle or store near an open flame, heat, or sources of ignition. Keep container tightly closed when not in use. Do not store in: Aluminum. Aluminum alloys. Additional storage and handling information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Ethene, tetrachloro-	Dow IHG	TWA	10 ppm
	ACGIH	TWA	25 ppm
	ACGIH	STEL	100 ppm
	ACGIH	TWA	BEI
	OSHA Z-2	TWA	100 ppm
	ACGIH	STEL	BEI
	OSHA Z-2	CEIL	200 ppm
	OSHA Z-2	Peak	300 ppm

Exposure controls

Engineering controls: Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only in enclosed systems or with local exhaust ventilation. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Viton. Examples of acceptable glove barrier materials include: Butyl rubber. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Color	Colorless

Odor	Characteristic
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	-22 °C (-8 °F) <i>Literature</i>
Freezing point	-22 °C (-8 °F) <i>Literature</i>
Boiling point (760 mmHg)	121.4 °C (250.5 °F) <i>Literature</i>
Flash point	closed cup ASTM D 56 (none)
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	13 mmHg at 20 °C (68 °F) <i>Literature</i>
Relative Vapor Density (air = 1)	5.76 <i>Literature</i>
Relative Density (water = 1)	1.619 at 25 °C (77 °F) <i>Literature</i>
Water solubility	0.015 % at 25 °C (77 °F) <i>Literature</i>
Partition coefficient: n-octanol/water	log Pow: 2.53 <i>Measured</i>
Auto-ignition temperature	Not combustible.
Decomposition temperature	No test data available
Kinematic Viscosity	0.52 mm ² /s at 25 °C (77 °F) <i>Estimated.</i>
Explosive properties	No
Oxidizing properties	No
Molecular weight	165.8 g/mol <i>Literature</i>
Percent volatility	100 % <i>Literature</i>

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7.

Possibility of hazardous reactions: Polymerization will not occur.

Conditions to avoid: Exposure to elevated temperatures can cause product to decompose. Avoid open flames, welding arcs, or other high temperature sources which induce thermal decomposition. Avoid direct sunlight or ultraviolet sources.

Incompatible materials: Avoid contact with: Strong bases. Strong oxidizers. Avoid contact with metals such as: Zinc powders. Zinc. Aluminum powders. Magnesium powders. Potassium. Sodium. Avoid unintended contact with: Amines.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Decomposition products can include trace amounts of: Chlorine. Phosgene.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

LD50, Rat, > 3,000 mg/kg OECD 401 or equivalent

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

LD50, Rabbit, > 10,000 mg/kg Other guidelines

Acute inhalation toxicity

In confined or poorly ventilated areas, vapor can readily accumulate and can cause unconsciousness and death. Dizziness may occur at 200 ppm perchloroethylene; progressively higher levels may also cause nasal irritation, nausea, incoordination, drunkenness, and over 1000 ppm, unconsciousness and death. A single brief (minutes) inhalation exposure to levels above 6000 ppm perchloroethylene may be immediately fatal. Based on structural analogy and/or equivocal data in animals, excessive exposure may potentially increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Alcohol consumed before or after exposure may increase adverse effects.

LC50, Rat, 4 Hour, vapour, > 20 mg/l

Skin corrosion/irritation

Brief contact may cause moderate skin irritation with local redness.

Repeated contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage.

Prolonged or repeated exposure may cause defatting of the skin leading to drying or flaking of skin.

Serious eye damage/eye irritation

May cause pain disproportionate to the level of irritation to eye tissues.

May cause slight temporary eye irritation.

Low vapor concentrations may cause eye irritation; these concentrations are easily attainable at room temperature.

Sensitization

Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause drowsiness or dizziness.

Route of Exposure: Inhalation

Target Organs: Central nervous system

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In humans, effects have been reported on the following organs:

Central nervous system.

In animals, effects have been reported on the following organs:

Central nervous system.

Kidney.

Liver.

Observations in animals include:

Anesthetic or narcotic effects.

Carcinogenicity

Perchloroethylene has been shown to increase the incidence of tumors in certain strains of mice and rats. Other long-term inhalation studies in rats failed to show tumorigenic response. Human data are limited and have not established an association between perchloroethylene exposure and cancer.

Perchloroethylene is not believed to pose a measurable carcinogenic risk to man when handled as recommended.

Teratogenicity

Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Reproductive toxicity

In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. In animal studies, did not interfere with fertility.

Mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Carcinogenicity**Component**

Ethene, tetrachloro-

List

IARC

US NTP

ACGIH

Classification

Group 2A: Probably carcinogenic to humans

Reasonably anticipated to be a human carcinogen

A3: Confirmed animal carcinogen with unknown relevance to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity**Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), flow-through test, 96 Hour, 5 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 8.5 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

EC50, Green algae (*Chlamydomonas reinhardtii*), 72 Hour, Growth rate inhibition, 3.64 mg/l, OECD Test Guideline 201 or Equivalent

EC50, Green algae (*Chlamydomonas reinhardtii*), 72 Hour, Growth rate inhibition, 1.77 mg/l

Toxicity to bacteria

IC50, Bacteria, 24 Hour, 112 mg/l

Chronic aquatic toxicity

Chronic toxicity to aquatic invertebrates

NOEC, *Daphnia magna* (Water flea), semi-static test, 28 d, number of offspring, 0.51 mg/l

Toxicity to soil-dwelling organisms

EC50, *Eisenia fetida* (earthworms), 24 Hour, 113.4 mg/kg

Persistence and degradability

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. Biodegradation may occur under anaerobic conditions (in the absence of oxygen). Biodegradation rate may increase in soil and/or water with acclimation.

Theoretical Oxygen Demand: 0.19 mg/mg

Photodegradation

Sensitizer: OH radicals

Atmospheric half-life: 50 d

Method: Estimated.

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): 2.53 Measured

Bioconcentration factor (BCF): 49 *Lepomis macrochirus* (Bluegill sunfish) 21 d Measured

Mobility in soil

Potential for mobility in soil is high (Koc between 50 and 150).

Partition coefficient (Koc): 141 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device. DISPOSAL OF CONTACT WATER: Process water in contact with solvent and/or water separators of cleaning or distillation equipment should be treated as hazardous waste. Do not discharge water from water separators to drain.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Tetrachloroethylene
UN number	UN 1897
Class	6.1
Packing group	III
Marine pollutant	Tetrachloroethylene
Reportable Quantity	Tetrachloroethylene

Classification for SEA transport (IMO-IMDG):

Proper shipping name	TETRACHLOROETHYLENE
UN number	UN 1897
Class	6.1
Packing group	III
Marine pollutant	Tetrachloroethylene
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Tetrachloroethylene
UN number	UN 1897
Class	6.1
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Acute Health Hazard
Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	CASRN
Ethene, tetrachloro-	127-18-4

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103

Components	CASRN	RQ
Ethene, tetrachloro-	127-18-4	100 lbs RQ

Pennsylvania Worker and Community Right-To-Know Act:

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Ethene, tetrachloro-	127-18-4

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Components	CASRN
Ethene, tetrachloro-	127-18-4
Trichloromethane	67-66-3
Carbon tetrachloride	56-23-5
1,1,1,2-Tetrachloroethane	630-20-6
1,1,2,2-Tetrachloroethane	79-34-5
Dichloromethane (methylene chloride)	75-09-2
1,1,2-Trichloroethylene	79-01-6
1,1,1,2,2,2-Hexachloroethane	67-72-1

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Components	CASRN
Trichloromethane	67-66-3

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Revision

Identification Number: 101198869 / A476 / Issue Date: 05/10/2016 / Version: 13.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
BEI	Biological Exposure Indices
CEIL	Acceptable ceiling concentration
Dow IHG	Dow Industrial Hygiene Guideline
OSHA Z-2	USA. Occupational Exposure Limits (OSHA) - Table Z-2
Peak	Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift
STEL	Short-term exposure limit
TWA	8-hour time weighted average

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

BLUE CUBE OPERATIONS LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Injectable Sizing

OTHER MEANS OF IDENTIFICATION: Not applicable.

GENERAL USE: .For professional drycleaning use only.

PRODUCT DESCRIPTION: Sizing

MANUFACTURER

Adco Professional Products LLC
1706 Ledo Rd.
Albany, GA 31707

Product Information: 800-821-7556 (USA
& Canada only)

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947 (USA & Canada
only) or 651-632-9272

Transportation Emergency: 800-424-9300 (USA &
Canada only) or 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Flammable Liquids: Category 4

Skin Corrosion/Irritation: Category 2

Specific Target Organ Toxicity (STOT-SE) Central Nervous System: Category 3

Aspiration hazard: Category 1

GHS LABEL ELEMENTS

Symbol(s):



Signal Word: Danger

Hazard Statements:

H227 – Combustible liquid.

H304 – May be fatal if swallowed and enters airways.

H315 – Causes skin irritation.

H336 – May cause drowsiness or dizziness.

Precautionary Statements:

P210 – Keep away from heat/sparks/open flames/hot surfaces - No smoking.

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 – Wash skin thoroughly after handling.

P271 – Use only outdoors or in a well-ventilated area.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310+P331 – If SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
DO NOT induce vomiting.

P302+P352 – IF ON SKIN: Wash with plenty of soap and water.

P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 – Call POISON CENTER or doctor/physician if you feel unwell.

P332+P313 – If skin irritation occurs: Get medical advice/ attention.

P362+P364 – Take off contaminated clothing and wash before reuse.

P370+P378 – In case of fire: Use water fog or fine spray, foam, carbon dioxide extinguishers, or dry chemical extinguishers for extinction.

P403+P233+P235 – Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards: Not available.

Unknown Acute Toxicity: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The specific identities of one or more components of this product are withheld as a trade secret.

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS#</u>
Petroleum distillates	60 - 70	64742-88-7

COMMENTS: None.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing. Wash with water. Consult a physician if irritation persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove affected person to fresh air. If not breathing, give artificial respiration. Get medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation, redness, tearing, discomfort.

SKIN: Irritation.

SKIN ABSORPTION: No data available.

INGESTION: Gastrointestinal tract irritation, burning of throat and esophagus, nausea, vomiting, dizziness, drowsiness, unconsciousness, and other central nervous system effects.

INHALATION: May cause central nervous system depression, headache, nausea, dizziness, unconsciousness.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: NFPA Class IIIA

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spill with absorbent material and water, if necessary.

LARGE SPILL: Extinguish all ignition sources. Contain spill. Avoid breathing vapor. Clean up spills immediately with absorbent material, observing precautions in the Exposure Control/Personal Protection section (see section 8). Place absorbed material in closed containers for disposal (see section 13). Do not flush to sewer. Avoid contamination of ground and surface waters.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep away from heat, sparks and flame.

HANDLING: Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in labeled, tightly sealed containers in a cool, well-ventilated area.

ELECTROSTATIC ACCUMULATION HAZARD: Ground and bond containers when transferring material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

	EXPOSURE LIMITS					
	OSHA PEL		ACGIH TLV		Supplier OEL	
	ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
Petroleum distillates	TWA	500			NE	
	STEL	NE ^[1]			NE	

TABLE FOOTNOTES

1. NE=Not established.

The specific identities of one or more components of this product are withheld as a trade secret.

ENGINEERING CONTROLS: Not applicable.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields, or goggles.

SKIN: Neoprene or Barrier™ gloves.

RESPIRATORY: NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING: Where contact is likely, wear the appropriate chemical resistant equipment, which depending on circumstances may include gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Have eye wash station available. Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear.

PHYSICAL STATE: Liquid.

COLOR: Light yellow.

ODOR: Mild.

ODOR THRESHOLD: No data available.

pH: Not applicable.

FREEZING POINT: No data available.

INITIAL BOILING POINT: No data available.

FLASHPOINT: 68°C (155°F) (TCC)

EVAPORATION RATE: No data available.

FLAMMABILITY (Solid, Gas): Not applicable, this product is a liquid at room temperature.

FLAMMABLE LIMITS: No data available.

VAPOR PRESSURE: No data available.

VAPOR DENSITY: No data available.

RELATIVE DENSITY: 0.856

SOLUBILITY IN WATER: Insoluble.

PARTITION COEFFICIENT (Log K_{ow}): No data available.

AUTOIGNITION TEMPERATURE: No data available.

DECOMPOSITION TEMPERATURE: No data available.

VISCOSITY: 16 sec, Zahn #2

PERCENT VOLATILE: ~65

10. STABILITY AND REACTIVITY

REACTIVITY: No.

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Polymerization will not occur.

CONDITIONS TO AVOID: High heat.

INCOMPATIBLE MATERIALS: Strong oxidizers, strong alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS: High heat may form noxious decomposition products.

11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Inhalation and skin.

ACUTE TOXICITY (ATE)

DERMAL LD₅₀: Insufficient data available.

ORAL LD₅₀: > 2,000 mg/kg (rat)

INHALATION LC₅₀: Insufficient data available.

CHRONIC TOXICITY

TARGET ORGANS: Components of this product may cause damage to central nervous system, brain, and lungs.

SENSITIZATION: Insufficient data available.

CARCINOGENICITY

IARC: Not listed as a carcinogen.

NTP: Not listed as a carcinogen

OSHA: Not listed as a carcinogen.

OTHER: No data available.

OTHER: No data available.

REPRODUCTIVE EFFECTS: Insufficient data available.

MUTAGENICITY: Insufficient data available.

SYNERGISTIC MATERIALS: No data available.

POTENTIAL HEALTH EFFECTS

EYES: Insufficient data available.

SKIN: Insufficient data available.

SKIN ABSORPTION: Insufficient data available.

INGESTION: May be harmful if swallowed. In the case of vomiting, product may be aspirated into lungs causing chemical pneumonia, which in extreme cases could lead to death. See section 4, First Aid Measures, for more information.

ASPIRATION HAZARD: Yes.

INHALATION: May be harmful if inhaled.

MEDICAL CONDITIONS AGGRAVATED: Significant exposure to this product may adversely affect people with chronic disease of the respiratory system, skin, and/or eyes.

GENERAL COMMENTS: Refer to Section 2 for additional information on potential health effects.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: Insufficient data available.

PERSISTENCE AND DEGRADABILITY: Insufficient data available.

BIOACCUMULATIVE POTENTIAL: Insufficient data available.

MOBILITY IN SOIL: Insufficient data available.

OTHER ADVERSE EFFECTS: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Incinerate or dispose of in accordance with federal, state and local regulations.

EMPTY CONTAINER: Not applicable.

RCRA/EPA WASTE INFORMATION: Contains no material listed by RCRA as a hazardous waste.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not regulated if shipped by ground.

OTHER SHIPPING INFORMATION: Not applicable.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Not regulated if shipped by ground.

OTHER SHIPPING INFORMATION: Not applicable.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Combustible Liquid, NOS

PRIMARY HAZARD CLASS/DIVISION: Combustible Liquid

UN/NA NUMBER: UN1993

PACKING GROUP: III

LABEL: Consult applicable regulations governing air shipments.

PLACARDS: Consult applicable regulations governing air shipments.

IATA NOTE: Consult IATA for quantity limitations.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: Yes. **PRESSURE GENERATING:** No. **REACTIVITY:** No. **ACUTE:** Yes. **CHRONIC:** Yes.

313 REPORTABLE INGREDIENTS: None.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: Not applicable.

REPORTABLE SPILL QUANTITY: Not applicable.

RCRA STATUS: See section 13.

MEXICO

Not regulated for ground transportation.

STATE REGULATIONS

MASSACHUSETTS

Contains one or more substances regulated by the Massachusetts Substance List.

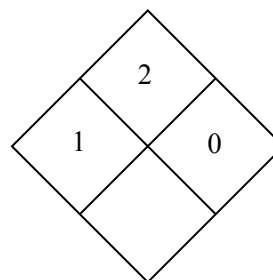
CALIFORNIA

PROPOSITION 65 STATEMENT: This product contains no ingredients known to the state of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS RATINGS	
HEALTH:	1
FLAMMABILITY:	2
REACTIVITY:	0
PERSONAL PROTECTION:	B

NFPA RATINGS



SDS Revision Date: October 17, 2018

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Laidlaw RSR (Rapid Stain Remover) Digester

OTHER MEANS OF IDENTIFICATION: Not applicable.

GENERAL USE: For professional laundry & wetcleaning use only.

PRODUCT DESCRIPTION: Digester

MANUFACTURER

Adco Professional Products LLC
1706 Ledo Rd.
Albany, GA 31707

Product Information: 800-323-7206 (USA
& Canada only)

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947 (USA & Canada
only) or 651-632-9272

Transportation Emergency: 800-424-9300 (USA &
Canada only) or 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Skin Corrosion/Irritation: Category 2

Serious Eye Damage/Irritation: Category 2B

Sensitization – Respiratory: Category 1

GHS LABEL ELEMENTS

Symbol(s):



Signal Word: Danger

Hazard Statements:

H315 – Causes skin irritation.

H320 – Causes eye irritation.

H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary Statements:

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.

P262 – Do not get in eyes, on skin or on clothing.

P264 – Wash hands thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P285 – In case of inadequate ventilation wear respiratory protection.

P302+P352 – IF ON SKIN: Wash with plenty of soap and water.

P304+P341 – IF INHALED: If breathing is difficult, remove affected person to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332+P313 – If skin irritation occurs: Get medical advice/attention.

P337+P313 – If eye irritation persists: Get medical advice/attention.

P342+P311 – IF experiencing respiratory symptoms, call a POISON CENTER or doctor/physician.
 P362+P364 – Take off contaminated clothing and wash before reuse.
 P403+P233+P235 – Store in a dry, well-ventilated place. Keep container tightly closed. Keep cool.
 P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards: Repeated inhalation of enzyme dust or aerosols resulting from improper handling may induce sensitization and may cause allergic type 1 reactions in sensitized individuals.

Unknown Acute Toxicity: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The specific identity of one or more component(s) of this product are withheld as a trade secret.

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>
Sodium tripolyphosphate	< 10	7758-29-4
Subtilisins	< 30	9014-01-1
Disodium Phosphate	< 35	7558-79-4

COMMENTS: None.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Seek immediate medical attention.

SKIN: Wash skin contact area with plenty of soap and water. Seek immediate medical attention if a rash or irritation occurs. Remove and wash contaminated clothing before re-use.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician. Give several glasses of water.

INHALATION: Remove affected person to fresh air. If not breathing, give artificial respiration and seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Dryness, tearing and mild to severe irritation depending upon duration of contact.

SKIN: Irritation, dryness, reddening of the skin.

SKIN ABSORPTION: Insufficient data available.

INGESTION: May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

INHALATION: May cause coughing, sneezing, shortness of breath, and irritation to the nose, throat and lungs.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not applicable.

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide.

OTHER CONSIDERATIONS: May cause allergic respiratory reaction.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear. Use water spray to cool fire-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spills immediately with absorbent material, observing precautions in the Exposure Controls / Personal Protection section (see section 8). Flush cleaned area thoroughly with water. Avoid splashing and high pressure washing (avoid formation of aerosols). Ensure sufficient ventilation. Wash contaminated clothing. All spilled material must be contained and kept out of waterways, sewers and drains.

LARGE SPILL: Contain spill. Avoid breathing dust. Clean up spills immediately with absorbent material, observing precautions in the Exposure Controls / Personal Protection section (see section 8). Flush cleaned area thoroughly with water. Spilled material should be removed immediately to avoid formation of dust from dried material. Take up by mechanical means preferably by a vacuum cleaner equipped with a high efficiency filter. Flush remainder carefully with plenty of water. Avoid splashing and high pressure washing (avoid formation of aerosols). Ensure sufficient ventilation. Wash contaminated clothing. All spilled material must be contained and kept out of waterways, sewers and drains.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep out of the reach of children.

HANDLING: Ensure adequate ventilation. Avoid formation of dust and aerosols. Wash hands thoroughly after handling. Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in labeled, tightly sealed containers in a cool, dry area (0-25 °C/32-77 °F). Protect from the sun.

ELECTROSTATIC ACCUMULATION HAZARD: Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

		<u>EXPOSURE LIMITS</u>					
		<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>Supplier OEL</u>	
		<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>
Sodium tripolyphosphate	TWA	NE ^[1]	NE	NE	NE		
	STEL	NE	NE	NE	NE		
Subtilisins	TWA	NE	NE	NE	0.00006 ^[2]		
	STEL	NE	NE	NE	NE		
Disodium Phosphate	TWA	NE	NE	10	NE		
	STEL	NE	NE	NE	NE		

TABLE FOOTNOTES:

1. NE=Not established.
2. Ceiling (as crystalline active enzyme, listed under Subtilisins)

The specific identity of one or more component(s) of this product are withheld as a trade secret.

ENGINEERING CONTROLS: Local exhaust may be required to control dust concentration.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses and chemical splash goggles.

SKIN: Rubber, Neoprene, or Barrier™ gloves.

RESPIRATORY: NIOSH/MSHA approved dust respirator may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

PROTECTIVE CLOTHING: Where contact is likely, wear the appropriate chemical resistant equipment, which depending on circumstances may include chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Have eye wash station available. Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White powder.

PHYSICAL STATE: Solid

COLOR: White.

ODOR: Low to no odor

ODOR THRESHOLD: No data available.

pH: No data available.

FREEZING POINT: No data available.

INITIAL BOILING POINT: Not applicable.

FLASHPOINT: Not applicable.

EVAPORATION RATE: Not applicable.

FLAMMABILITY (Solid, Gas): Non-flammable.

FLAMMABLE LIMITS: Not applicable.

VAPOR PRESSURE: No data available.

VAPOR DENSITY: No data available.

RELATIVE DENSITY: No data available.

SOLUBILITY IN WATER: Soluble.

PARTITION COEFFICIENT (Log K_{ow}): No data available.

AUTOIGNITION TEMPERATURE: Not applicable.

DECOMPOSITION TEMPERATURE: No data available.

VISCOSITY: Not applicable.

PERCENT VOLATILE: No data available.

10. STABILITY AND REACTIVITY

REACTIVITY: No.

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Polymerization will not occur.

CONDITIONS TO AVOID: Moisture may cause clumps and caking together of the powder. Dusting conditions, extreme heat, extreme humidity.

INCOMPATIBLE MATERIALS: Strong acids, alkaloids, pyrogallol, lead acetate, resorcinol.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Sodium and Phosphorus.

11. TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Inhalation and skin.

ACUTE TOXICITY (ATE)

DERMAL LD₅₀: 7,761 mg/kg (Rabbit)

ORAL LD₅₀: 2,718 mg/kg (Rat).

INHALATION LC₅₀: Insufficient data available.

CHRONIC TOXICITY

TARGET ORGANS: Respiratory tract.

SENSITIZATION: Contains protease. Inhalation of enzyme dust may induce sensitization and may cause allergic reactions

CARCINOGENICITY

IARC: Not listed as a carcinogen.

NTP: Not listed as a carcinogen.

OSHA: Not listed as a carcinogen.

OTHER: No data available.

OTHER: No data available.

REPRODUCTIVE EFFECTS: Insufficient data available.

MUTAGENICITY: Insufficient data available.

SYNERGISTIC MATERIALS: None known.

POTENTIAL HEALTH EFFECTS

EYES: Insufficient data available.

SKIN: Insufficient data available.

SKIN ABSORPTION: Insufficient data available.

INGESTION: May be harmful if swallowed.

ASPIRATION HAZARD: Insufficient data available.

INHALATION: May be harmful if inhaled. Inhalation of enzyme dust may induce sensitization and may cause allergic reactions.

MEDICAL CONDITIONS AGGRAVATED: Insufficient data available.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: A component of this product has moderate aquatic toxicity.

PERSISTENCE AND DEGRADABILITY: Insufficient data available.

BIOACCUMULATIVE POTENTIAL: Insufficient data available.

MOBILITY IN SOIL: Insufficient data available.

OTHER ADVERSE EFFECTS: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with federal, state and local regulations.

EMPTY CONTAINER: Not applicable.

RCRA/EPA WASTE INFORMATION: Contains no material listed by RCRA as a hazardous waste.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not regulated.

OTHER SHIPPING INFORMATION: Not applicable.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Not regulated.

OTHER SHIPPING INFORMATION: Not applicable.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not regulated.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES:

FIRE: No. **PRESSURE GENERATING:** No. **REACTIVITY:** No. **ACUTE:** Yes.
CHRONIC: No.

313 REPORTABLE INGREDIENTS: None.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: 5000 lbs (sodium tripolyphosphate) 5000 lbs (disodium phosphate)

REPORTABLE SPILL QUANTITY: $\geq 11,111$ lbs

RCRA STATUS: See section 13.

MEXICO

Not regulated for transport.

STATE REGULATIONS

MASSACHUSETTS

Contains one or more substances regulated by the Massachusetts Substance List.

NEW JERSEY

Sodium tripolyphosphate, subtilisins and disodium phosphate are classified as workplace hazards.

PENNSYLVANIA

Contains one or more substances on the Pennsylvania Hazardous Substance List.

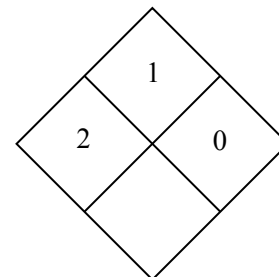
CALIFORNIA

PROPOSITION 65 STATEMENT: This product contains no ingredients known to the state of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS RATINGS	
HEALTH:	2
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTION:	B

NFPA RATINGS



SDS Revision Date: December 17, 2015



Liquid Laundry Detergent

1. Product and Company Identification

Product Name	Liquid Laundry Detergent
Synonyms	Mild liquid laundry detergent
MSDS Number	D22676
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, orange
Odor	Lemon fragrance
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200): corrosive
GHS Classification	Acute toxicity, oral (Category 4) Skin irritation (Category 2) Serious eye damage (Category 1) Acute aquatic toxicity (Category 2)

Pictogram



Signal Word Danger

Hazard Statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H401	Toxic to aquatic life.

Precautionary Statement(s)

P264	Wash exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear eye protection.
P301 + P330 + P312	IF SWALLOWED: Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.



Potential Acute Health Effects

Inhalation	Mist or vapors may cause irritation of the respiratory system.
Ingestion	Corrosive to the mouth, esophagus, and mucous membranes.
Skin	May cause skin irritation on repeated or prolonged contact.
Eyes	Can cause eye damage.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Tetrapotassium Pyrophosphate	7320-34-5	1.5-3.0
Sodium Dodecylbenzene Sulfonate	25155-30-0	15-18
Cocoamide	8051-30-7	1.5-3.0
Sodium Laureth Sulfate	9004-82-4	8-12
Ethanol	64-17-5	2.0-3.0
Isopropyl Alcohol	67-63-0	2.0-2.5
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off with soap and plenty of water. Consult a physician if irritation persists.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None

Extinguishing Media

Suitable	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear chemical protective clothing and self-contained breathing apparatus for firefighting.
Unusual Fire & Explosion Hazards	None known.



6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Release to the environment must be avoided.
Spill	Contain spillage, and then place in container for disposal according to local regulations.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Store at ambient temperatures.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Tetrapotassium Pyrophosphate	Not established	Not established
Sodium Dodecylbenzene Sulfonate	Not established	Not established
Cocoamide	Not established	Not established
Sodium Laureth Sulfate	Not established	Not established
Ethanol	1000 ppm	1000 ppm
Isopropyl Alcohol	200 ppm - TWA	400 ppm - TWA
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	
Eyes and Face	Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.	
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.	

9. Physical and Chemical Properties

Appearance	Clear, orange liquid
Odor	Lemon fragrance
pH	6.8 – 7.2
Water Solubility	Complete
Vapor Density (air = 1)	Not established
Evaporation rate (butyl acetate = 1)	Not established
Boiling Point (°F)	212 °F (100 °C)



Freezing Point (°F)	About 0 °F (-17.8 °C)
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.068
Vapor Pressure (mm Hg, 20 °C)	Not determined
Volatile Organic (VOC) Content	< 5%

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid		None known.							
Materials to Avoid		None known.							
Decomposition Products		Not known.							

11. Toxicological Information

Eye	Can cause eye damage.
Tetrapotassium Pyrophosphate	Eyes – rabbit – moderate irritation
Sodium Dodecylbenzene Sulfonate	Eyes – rabbit – severe eye irritation – 24 h
Cocoamide	Eyes – no data available
Sodium Laureth Sulfate	Eyes – no data available
Ethanol	Eyes – rabbit – mild irritation – 24 h
Isopropyl Alcohol	Eye – rabbit – irritating – 24 h
Dermal	May cause skin irritation on repeated or prolonged contact.
Tetrapotassium Pyrophosphate	Dermal LD50 – rabbit – > 4640 mg/kg Skin corrosion/irritation: rabbit - irritating
Sodium Dodecylbenzene Sulfonate	Dermal LD50 – no data available Skin corrosion/irritation: rabbit – skin irritation – 24 h
Cocoamide	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Sodium Laureth Sulfate	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Ethanol	Dermal LD50 – no data available Skin corrosion/irritation: rabbit – no irritation – 24 h
Isopropyl Alcohol	Dermal LD50 – rabbit – 12,800 mg/kg Skin corrosion/irritation: rabbit – mild irritation
Inhalation	Mist or vapors may cause irritation of the respiratory system.
Tetrapotassium Pyrophosphate	Inhalation LC50 – no data available
Sodium Dodecylbenzene Sulfonate	Inhalation LC50 – no data available
Cocoamide	Inhalation LC50 – no data available



	Sodium Laureth Sulfate	Inhalation LC50 – no data available
	Ethanol	Inhalation LC50 – rat – 20,000 ppm – 10 h
	Isopropyl Alcohol	Inhalation LC50 – rat – 16,000 ppm – 8 h
Oral		Corrosive to the mouth, esophagus, and mucous membranes.
	Tetrapotassium Pyrophosphate	Oral LD50 – rat – > 1000 mg/kg
	Sodium Dodecylbenzene Sulfonate	Oral LD50 – rat – 438 mg/kg
	Cocoamide	Oral LD50 – no data available
	Sodium Laureth Sulfate	Oral LD50 – no data available
	Ethanol	Oral LD50 – rat – 7060 mg/kg
	Isopropyl Alcohol	Oral LD50 – rat – 5045 mg/kg

Potential Chronic Health Effects

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by NTP or OSHA. IARC: 3 – Group 3: Not classifiable as to its carcinogenicity to humans (2-Propanol). ACGH: A3: Confirmed animal carcinogen with unknown relevance to humans (Ethanol).
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	Reproductive toxicity – human(female) – oral: Effects on newborn: Apgar score (human only), other neonatal measures or effects, drug dependence (ethanol).

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	Toxicity to fish: LC50 – Onchorhynchus mykiss (rainbow trout) – 3.2-5.6 mg/l – 96 h (sodium dodecylbenzene sulfonate) LC50 – Brachydanio rerio (zebra fish) – 5.4 mg/l – 96 h (cocoamide) LC50 – Pimephales promelas (fathead minnow) – 2.7 mg/l – 96 h (isopropyl alcohol) Toxicity to aquatic invertebrates: Mortality NOEC - Daphnia - 4 mg/l - 7 d (sodium dodecylbenzene sulfonate) EC50 – Daphnia magna (water flea) – 2.39 mg/l – 24 h (cocoamide) EC50 – Daphnia magna (water flea) – 5102.00 mg/l – 24 h (isopropyl alcohol) An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.



13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Not DOT regulated	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Not applicable	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. Sodium Dodecylbenzene Sulfonate CERCLA reporting amount – 1000 lbs.
SARA Title III Section 313	This product does not require reporting.
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. Sodium Dodecylbenzene Sulfonate
TSCA – Toxic Substances Control Act	All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.
RCRA – Resource Conservation and Recovery Act	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal. No components listed
State Regulations	
Massachusetts	RTK Substances: The following components are listed: Sodium Dodecylbenzene Sulfonate (CAS #25155-30-0), Isopropyl Alcohol (CAS #67-63-0), Ethanol (CAS #64-17-5)
New Jersey	RTK Substances: The following components are listed: : Tetrapotassium pyrophosphate (CAS #7320-34-5), Sodium Dodecylbenzene Sulfonate (CAS #25155-30-0), Isopropyl Alcohol (CAS #67-63-0), Ethanol (CAS #64-17-5)
Pennsylvania	RTK Substances: The following components are listed: : Tetrapotassium pyrophosphate (CAS #7320-34-5), Sodium Dodecylbenzene Sulfonate (CAS #25155-30-0), Isopropyl Alcohol (CAS #67-63-0), Ethanol (CAS #64-17-5)
California	Proposition 65: WARNING: This product may contain trace amounts of a chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm: ethylene oxide (CAS #75-21-8).

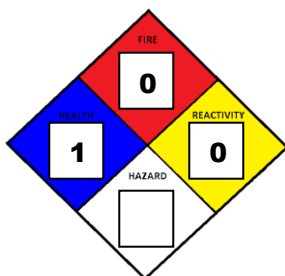


WARNING: This product contains trace amounts of a chemical known to the State of California to cause cancer: 1,4-Dioxane (CAS #123-91-1).

16. Other Information

Date of Issue 10/22/2014 | 4/20/2015-corrected spelling error, section 3 | 5/28/2015-updated GHS classification and statements, section 2 – updated ingredient list, section 3 | 12/15/2015-updated GHS statement discrepancies, section 2 (ST) | 8/22/2019-updated TSCA statement, section 15 (ST) | 3/9/2021-updated address, section 1 (ST)

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.



Odor Check-10

1. Product and Company Identification

Product Name	Odor Check-10
Synonyms	None
SDS Number	D15257
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Liquid
Color	Clear, yellow
Odor	Odorless
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); irritant
GHS Classification	Eye irritation (Category 2B)
Pictogram	None
Signal Word	Warning
Hazard Statement(s)	
H320	Causes eye irritation.
Precautionary Statement(s)	
P264	Wash skin thoroughly after handling.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Potential Acute Health Effects

Inhalation	Mist or vapors can cause irritation of the respiratory system.
Ingestion	Generally not considered toxic.
Skin	May cause skin irritation on repeated or prolonged contact.
Eyes	Causes mild eye irritation.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
1-(3-Chloroallyl)-3,5,7-Triaza-1-Azoniaadamantane Chloride	4080-31-3	~ 1
Water	7732-18-5	Balance

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if eye irritation persists.
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Skin Contact	Wash off with soap and plenty of water. Consult a physician if skin irritation develops.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Drink large amounts of water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None

Extinguishing Media

Suitable	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear self-contained breathing apparatus for firefighting.
Unusual Fire & Explosion Hazards	None known.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Spill	Contain spillage, and then place in container for disposal according to local regulations.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Store at ambient temperatures.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
1-(3-Chloroallyl)-3,5,7-Triaza-1-Azoniaadamantane Chloride	Not established	Not established
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	



Eyes and Face Wear chemical safety goggles while handling this product.

Skin Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.

9. Physical and Chemical Properties

Appearance	Clear, yellow liquid
Odor	Odorless
pH	6.0 to 7.0
Water Solubility	Complete
Vapor Density (air = 1)	Not determined
Evaporation rate (butyl acetate = 1)	Not determined
Boiling Point (°F)	212 °F (100 °C)
Freezing Point (°F)	About 32 °F (0 °C)
Specific Gravity (H ₂ O = 1 @ 70 °F)	1.00
Vapor Pressure (mm Hg, 20 °C)	Not determined
Volatile Organic (VOC) Content	None

10. Stability and Reactivity

Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	None known.								
Materials to Avoid	None known.								
Decomposition Products	Not known.								

11. Toxicological Information

Eye	Causes mild eye irritation.
1-(3-Chloroallyl)- 3,5,7-Triaza-1- Azoniaadamantane Chloride	Eyes – no data available
Dermal	May cause skin irritation on repeated or prolonged contact.
1-(3-Chloroallyl)- 3,5,7-Triaza-1- Azoniaadamantane Chloride	Dermal LD50 – no data available Skin corrosion/irritation: no data available
Inhalation	Mist or vapors can cause irritation of the respiratory system.
1-(3-Chloroallyl)- 3,5,7-Triaza-1- Azoniaadamantane Chloride	Inhalation LC50 – no data available
Oral	Generally not considered toxic. Consult a physician.
1-(3-Chloroallyl)- 3,5,7-Triaza-1- Azoniaadamantane Chloride	Oral LD50 – no data available



Potential Chronic Health Effects

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	No data available

12. Ecological Information

Biodegradability	No data available
Ecotoxicity	No data available

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Not DOT regulated	Same
Hazard Class	Not applicable	Same
Identification Number	Not applicable	Same
Packing Group	Not applicable	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Not applicable	Same

15. Regulatory Information

CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. No component requires reporting
SARA Title III Section 313	This product is known to contain the following chemicals which are listed in 40 CFR 372.65 as toxic chemicals requiring notification. This information must be included in all SDS's that are copied and distributed for this product. 1-(3-Chloroallyl)-3,5,7-Triaza-1-Azoniaadamantane Chloride – CAS# 4080-31-3
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. Product not listed
TSCA – Toxic Substances Control Act	All components of this product are listed as "Active" on the Toxic Substances Control Act (TSCA) 8(b) Inventory.
RCRA – Resource	The requirements of the federal hazardous waste regulations do not apply unless the



Conservation and Recovery Act

waste fails to pass any of EPA's four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

No components listed

State Regulations

Massachusetts

RTK Substances: The following components are listed: no component listed

New Jersey

RTK Substances: The following components are listed: 1-(3-Chloroallyl)-3,5,7-Triaza-1-Azoniaadamantane Chloride (CAS #4080-31-3)

Pennsylvania

RTK Substances: The following components are listed: 1-(3-Chloroallyl)-3,5,7-Triaza-1-Azoniaadamantane Chloride (CAS #4080-31-3)

California

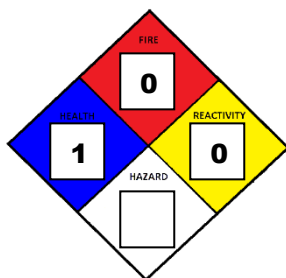
Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue

4/29/2021

NFPA



HMIS

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

Notice to Reader

The information contained herein is given in good faith, but no warranty, representation, inducement, or license of any kind is made, except that the information is accurate to the best of Wausau Chemical Corporation's knowledge, or is obtained from sources believed by Wausau Chemical Corporation to be reliable and accurate. Wausau Chemical Corporation does not assume any legal responsibility for use or reliance upon the information being furnished. Customers are encouraged to conduct their own tests. Before using any product, read the container label directions, as well as, the Safety Data Sheet.



Oxygen Bleach

1. Product and Company Identification

Product Name	Oxygen Bleach
Synonyms	Non-chlorinated bleach
SDS Number	D22667
Company Identification	Wausau Chemical Corporation 9919 Innovation Way Wausau, WI 54401
Telephone	Wausau Chemical Corporation – 715.842.2285 CHEMTREC – 800.424.9300

NFPA diamond and HMIS ratings for this product may be found in section 16 of this Safety Data Sheet.

2. Hazards Identification

Form	Crystalline solid
Color	White
Odor	Odorless
OSHA/HCS Status	Material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200); oxidizer
GHS Classification	Oxidizing solids (Category 2) Acute toxicity, oral (Category 4) Serious eye damage (Category 1) Acute aquatic toxicity (Category 2) Chronic aquatic toxicity (Category 2)

Pictogram



Signal Word Danger

Hazard Statement(s)

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H318	Causes serious eye damage
H411	Toxic to aquatic life with long lasting effects

Precautionary Statement(s)

P210	Keep away from heat.
P220	Keep/store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P312	IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.



P370 + P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for extinction.
P391	Collect spillage.
P501	Dispose of contents/container to an approved waste disposal plant.

Potential Acute Health Effects

Inhalation	May cause irritation of the mucous membranes and upper respiratory tract.
Ingestion	Harmful if swallowed.
Skin	May cause skin irritation.
Eyes	Causes severe eye burns.

See section 11 for more detailed information on health effects and symptoms

3. Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>WT %</u>
Sodium Percarbonate	15630-89-4	100
As available oxygen		13

4. First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.
Skin Contact	Take off contaminated clothing and shoes. Wash off with soap and plenty of water. Consult a physician if irritation develops.
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Protection of First Aid Personnel	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear gloves while removing contaminated clothing. If it is suspected that dust, vapor, mist, or gas is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus.

5. Fire-fighting Measures

Flammability of the Product	Not flammable or combustible
Flash Point (Method)	None
Auto Ignition Temperature	None

Extinguishing Media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Not Suitable	No data available
Special Fire-fighting Procedures & Hazards	Wear self-contained breathing apparatus for firefighting. Use water spray to cool unopened containers.
Unusual Fire & Explosion Hazards	Do not allow water to enter container because of violent reaction. Keep container tightly closed. Powerful oxidizing agent; may ignite oxidizable materials.

6. Accidental Release Measures



Personal Precautions	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge to the environment must be avoided.
Spill	Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep is suitable, closed containers for disposal.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Avoid formation of dust. Keep away from sources of ignition – no smoking. Keep away from heat.
Storage	Keep containers tightly closed in a dry and well-ventilated area. Oxidizing materials should be stored in a separate area away from this product.

8. Exposure Controls/Personal Protection

<u>Ingredient Name</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Sodium Percarbonate	Not established	Not established
Engineering Measures	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. Maintain adequate ventilation. Keep levels below exposure limits.	
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.	
Respiratory	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.	
Eyes and Face	Wear chemical safety goggles while handling this product.	
Skin	Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: gauntlet-type, neoprene, nitrile.	

9. Physical and Chemical Properties

Appearance	White, crystalline solid
Odor	Odorless
pH	1% solution, about 10.2
Water Solubility	Complete
Vapor Density (air = 1)	Not applicable
Evaporation rate (butyl acetate = 1)	Not applicable
Boiling Point (°F)	Not applicable
Freezing Point (°F)	Not determined
Specific Gravity (H ₂ O = 1 @ 70 °F)	Not applicable
Vapor Pressure (mm Hg, 20 °C)	Not applicable
Volatile Organic (VOC) Content	None

10. Stability and Reactivity



Stable:	X	Unstable:		Hazardous Polymerization:		Occurs:		Does Not Occur:	X
Conditions to Avoid	Moisture or excessive heat will initiate decomposition.								
Materials to Avoid	Reducing agents, strong acids, organic materials, powdered metals.								
Decomposition Products	Hydrogen peroxide and oxygen.								

11. Toxicological Information

Eye	Causes severe eye irritation and possible damage.
Sodium Percarbonate	Eyes - rabbit – severe eye irritation
Dermal	May cause skin irritation repeated or prolonged contact.
Sodium Percarbonate	Dermal LD50 – rabbit – > 2000 mg/kg Skin corrosion/irritation: rabbit – mild skin irritation
Inhalation	May be harmful and irritating if inhaled.
Sodium Percarbonate	Inhalation LC50 – no data available
Oral	May be harmful if swallowed. Irritating to the mouth, esophagus and mucous membranes.
Sodium Percarbonate	Oral LD50 – rat – 1034 mg/kg

Potential Chronic Health Effects

Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible, or confirmed human carcinogen by IARC, ACGIH, NTP, or OSHA.
Mutagenicity	No data available
Teratogenicity	No data available
Fertility Effects	No data available

Over-exposure Signs/Symptoms

Cough, shortness of breath, headache, nausea, vomiting.

12. Ecological Information

Biodegradability	Does not bioaccumulate
Ecotoxicity	Toxicity to fish: LC50 – Pimephales promelas (fathead minnow) – 70.7 mg/l - 96 h Toxicity to aquatic invertebrates: EC50 – Daphnia magna (water flea) – 4.9 mg/l - 48 h An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

13. Disposal Considerations

Waste Disposal	Dispose of in a permitted waste management facility following all local, state, and federal regulations.
RCRA	No component of this product is listed as a hazardous waste.

14. Transportation



The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

US DOT 49 CFR 172.101	Non-bulk Shipments (Drums/Totes)	Bulk Shipments (Tank Trucks/Rail Cars)
Proper Shipping Name	Oxidizing Solid, N.O.S. (Sodium Percarbonate)	Same
Hazard Class	5.1	Same
Identification Number	UN1479	Same
Packing Group	II	Same
Reportable Quantities	Not applicable	Same
Placards/Labels	Oxidizer	Same

15. Regulatory Information

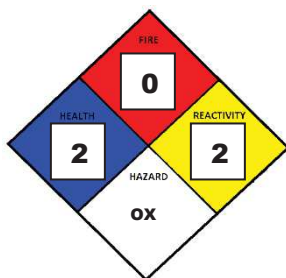
CERCLA / SARA Emergency Reporting	A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws. Product does not require reporting
SARA Title III Section 313	This product does not require reporting.
Clean Water Act (CWA) Section 311	The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. Product not listed
TSCA – Toxic Substances Control Act	All components of this product are listed as “Active” on the Toxic Substances Control Act (TSCA) 8(b) Inventory.
RCRA – Resource Conservation and Recovery Act	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA’s four tests for determining hazardous wastes. Note: If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal. No components listed
State Regulations	
Massachusetts	RTK Substances: The following components are listed: not listed
New Jersey	RTK Substances: The following components are listed: no component listed
Pennsylvania	RTK Substances: The following components are listed: no component listed
California	Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information

Date of Issue	6/19/2014 12/29/2017-updated GHS classification and associated statements, section 2 – updated packing group from III to II, section 14 (ST) 09/26/2019 – updated TSCA statement, section 15 (RP) 10/14/2020-updated company address, section 1 (ST)
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NFPA



HMIS

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	2
PPE	

Caution: NFPA and HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although these ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them.

The customer is responsible for determining the PPE code for this material.

Notice to Reader

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SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Soft 'N Brite

OTHER MEANS OF IDENTIFICATION: Not applicable.

GENERAL USE: For professional wetcleaning and laundry use only.

PRODUCT DESCRIPTION: Wetcleaning Detergent

MANUFACTURER

Adco Professional Products LLC
1706 Ledo Rd.
Albany, GA 31707

Product Information: 800-821-7556 (USA
& Canada only)

24 HR. EMERGENCY TELEPHONE NUMBERS

Medical Emergency: 866-303-6947 (USA & Canada
only) or 651-632-9272

Transportation Emergency: 800-424-9300 (USA &
Canada only) or 703-527-3887

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Serious Eye Damage/Irritation: Category 2B

GHS LABEL ELEMENTS

Symbol(s): Not applicable.

Signal Word: Warning

Hazard Statements:

H320 – Causes eye irritation.

Precautionary Statements:

P264 – Wash skin thoroughly after handling.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if, if present and easy to do. Continue rinsing.

P337+P313 – IF eye irritation persists: Get medical advice/attention.

P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

Other Hazards: Not available.

Unknown Acute Toxicity: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

The specific identity of one or more components of this product are withheld as a trade secret.

Chemical Name	Wt. %	CAS#
Trade Secret #1	-	-
Trade Secret #2	-	-
Trade Secret #3	-	-

COMMENTS: None.

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing. Wash with soap and water. Consult a physician if irritation persists.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.

INHALATION: Remove affected person to fresh air. If not breathing, give artificial respiration. Get medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Irritation.

SKIN ABSORPTION: No data available.

INGESTION: Discomfort and irritation of gastrointestinal tract, fatigue, dizziness, and possible loss of concentration.

INHALATION: Insufficient data available.

ADDITIONAL INFORMATION: After emergency actions, call the emergency medical information number on page 1 or a physician immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not applicable.

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, water spray or fog.

HAZARDOUS COMBUSTION PRODUCTS: No data available.

FIRE FIGHTING EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spill with absorbent material and water, if necessary.

LARGE SPILL: Contain spill. Clean up spills immediately with absorbent material, observing precautions in the Exposure Controls/Personal Protection section (see section 8). Place absorbed material in closed containers for disposal (see section 13).

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Not applicable.

HANDLING: Follow all SDS/label precautions even after container is emptied because it may retain product residues.

STORAGE: Store in labeled, tightly sealed containers.

ELECTROSTATIC ACCUMULATION HAZARD: Not applicable.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:**OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)**

	EXPOSURE LIMITS					
	OSHA PEL		ACGIH TLV		Supplier OEL	
	ppm	mg/m³	ppm	mg/m³	ppm	mg/m³
Trade Secret #1	TWA	NE ^[1]		NE		
	STEL	NE		NE		
Trade Secret #2	TWA	NE		NE		
	STEL	NE		NE		
Trade Secret #3	TWA	NE		NE		
	STEL	NE		NE		

TABLE FOOTNOTES:

1. NE=Not established.

The specific identities of one or more components of this product are withheld as a trade secret.

ENGINEERING CONTROLS: Not applicable.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Safety glasses with side shields, or goggles.

SKIN: Rubber or Barrier™ gloves.

RESPIRATORY: Not applicable.

PROTECTIVE CLOTHING: Not applicable.

WORK HYGIENIC PRACTICES: Wash thoroughly after handling. Do not eat or drink in work area.

OTHER USE PRECAUTIONS: Have eye wash station available. Do not wear contact lenses without eye protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear.

PHYSICAL STATE: Liquid.

COLOR: Blue.

ODOR: Clean, fresh odor.

ODOR THRESHOLD: No data available.

pH: 6.5-7.5

FREEZING POINT: No data available.

INITIAL BOILING POINT: No data available.

FLASHPOINT: >110°C (230°F) (PM).

EVAPORATION RATE: No data available.

FLAMMABILITY (Solid, Gas): Not applicable, this product is a liquid at room temperature.

FLAMMABLE LIMITS: Not applicable.

VAPOR PRESSURE: No data available.

VAPOR DENSITY: Lighter than air.

RELATIVE DENSITY: 1.02

SOLUBILITY IN WATER: Soluble.

PARTITION COEFFICIENT (Log K_{ow}): No data available.

AUTOIGNITION TEMPERATURE: No data available.

DECOMPOSITION TEMPERATURE: No data available.

VISCOSITY: No data available.

PERCENT VOLATILE: ~88

10. STABILITY AND REACTIVITY

REACTIVITY: No.

CHEMICAL STABILITY: Stable.

POSSIBILITY OF HAZARDOUS REACTIONS: Polymerization will not occur.

CONDITIONS TO AVOID: High heat.

INCOMPATIBLE MATERIALS: Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: High heat may form noxious decomposition product.

11. TOXICOLOGICAL INFORMATION

ROUTES OF ENTRY: Ingestion, skin.

ACUTE TOXICITY (ATE)

DERMAL LD₅₀: > 2,000 mg/kg (rabbit)

ORAL LD₅₀: > 2,000 mg/kg (rat)

INHALATION LC₅₀: Insufficient data available.

CHRONIC TOXICITY

TARGET ORGANS: A minor component of this product caused species specific hematological and kidney changes in certain lab animals. In rare cases excessive exposure to this component may cause central nervous system effects.

SENSITIZATION: Insufficient data available.

CARCINOGENICITY:

IARC: Not listed as a carcinogen.

NTP: Not listed as a carcinogen.

OSHA: Not listed as a carcinogen.

OTHER: No data.

OTHER: No data available.

REPRODUCTIVE EFFECTS: Insufficient data available.

MUTAGENICITY: Not mutagenic.

SYNERGISTIC MATERIALS: None known.

POTENTIAL HEALTH EFFECTS

EYES: Insufficient data available.

SKIN: Insufficient data available.

SKIN ABSORPTION: Insufficient data available.

INGESTION: Ingestion of large doses may cause central nervous system depression with collapse coma and death in cases of severe overexposure.

ASPIRATION HAZARD: Insufficient data available.

INHALATION: Insufficient data available.

MEDICAL CONDITIONS AGGRAVATED: Asthma and kidney conditions.

12. ECOLOGICAL INFORMATION

ECOTOXICITY: A component of this product is considered moderately toxic.

PERSISTENCE AND DEGRADABILITY: A component of this product is not readily biodegradable.

BIOACCUMULATIVE POTENTIAL: Insufficient data available.

MOBILITY IN SOIL: Insufficient data available.

OTHER ADVERSE EFFECTS: No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Incinerate or dispose of in accordance with federal, state, and local regulations.

EMPTY CONTAINER: Not applicable.

RCRA/EPA WASTE INFORMATION: Contains no material listed by RCRA as a hazardous waste.

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME: Not regulated.

OTHER SHIPPING INFORMATION: Not applicable.

CANADA TRANSPORT OF DANGEROUS GOODS

PROPER SHIPPING NAME: Not regulated.

OTHER SHIPPING INFORMATION: Not applicable.

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not regulated

15. REGULATORY INFORMATION**UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:**

FIRE: No. **PRESSURE GENERATING:** No. **REACTIVITY:** No. **ACUTE:** Yes.

CHRONIC: No.

313 REPORTABLE INGREDIENTS: None.

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: Not applicable.

REPORTABLE SPILL QUANTITY: Not applicable.

RCRA STATUS: See section 13.

MEXICO

Not applicable.

STATE REGULATIONS**MASSACHUSETTS**

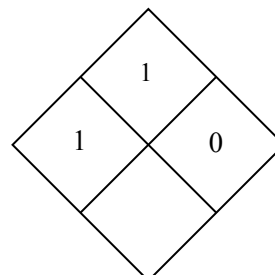
Contains no substances regulated by the Massachusetts Substance List.

CALIFORNIA

PROPOSITION 65 STATEMENT: This product contains no ingredients known to the state of California to cause cancer, birth defects, or other reproductive harm.

16. OTHER INFORMATION

HMIS RATINGS	
HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTION:	B

NFPA RATINGS**SDS Revision Date:** June 30, 2015