DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
**ACTIVITY REPORT: On-site Inspection**

P117559001

| | | |
|---|---|---|
| **FACILITY:** Utilimaster Corporation | | **SRN / ID:** P1175 |
| **LOCATION:** 1111 Mikesell Street, CHARLOTTE | | **DISTRICT:** Lansing |
| **CITY:** CHARLOTTE | | **COUNTY:** EATON |
| **CONTACT:** Mark Tack , Manager of Mfg Engineering | | **ACTIVITY DATE:** 07/21/2021 |
| **STAFF:** Michelle Luplow | **COMPLIANCE STATUS:** Compliance | **SOURCE CLASS:** SM OPT OUT |
| **SUBJECT:** Scheduled, onsite inspection to determine compliance with Utilimaster's Opt-out PTI 6-21 in addition to determining compliance at Builtmore, Royal Truck Body, and Spartan RV Chassis as part of the same stationary source. | | |
| **RESOLVED COMPLAINTS:** | | |

**Inspected by: Michelle Luplow**

**Personnel Present: Mark Tack, Manager of Mfg Engineering, Utilimaster (mark.tack@utilimaster.com)**

**Ryan Lowe, EHS Coordinator, Builtmore, et al. (ryan.lowe@theshyftgroup.com)**

**Steve Curry, EHS Director, Builtmore, et al.**

**Other Utilimaster Staff:**

**Cameron Watson, Director of EHS (cameron.watson@utilimaster.com)**

## Purpose

**Conduct an announced, scheduled, partial compliance evaluation (PCE) onsite inspection by determining compliance with Utilimaster's Opt-Out Permit No. 6-21; this inspection included an inspection of Builtmore, Spartan RV Chassis, and Royal Truck Body. Utilimaster and these 3 additional brands are considered the same stationary source. This inspection was conducted as part of a full compliance evaluation (FCE).**

## Facility Background/Regulatory Overview

**Utilimaster, Builtmore, Spartan RV Chassis, and Royal Truck Body are considered the same stationary source. The following is an evaluation of why these facilities are considered the same stationary source per AQD Policy & Procedure AQD-011:**

1. Are the properties adjacent and contiguous? Yes. See attached plant layout for all plants. These are contiguous and adjacent with respect to one another.
2. Are the entities under control of the same person (common ownership constitutes common control)? Builtmore, Spartan RV Chassis, Royal Truck Body, and Utilimaster are brands of The Shyft Group, the parent company; therefore, these facilities are under common control.
3. Do the entities share the same 2-digit major group code associated with the primary activity? Mark Tack (Utilimaster) and Ryan Lowe (Builtmore/Spartan RV Chassis/Royal Truck Body) shared that the SIC code for all brands is 3713, Truck and Bus Bodies.

**The Shyft Group owns and operates the following Plants:**

**Table 1. Plants owned by The Shyft Group.**

| Building | Address | The Shyft Group Brand |
|---|---|---|
| Plant 1 | 1000 Reynolds Rd | Spartan RV Chassis, Royal Truck Body/Duramag |
| Plant 4 | 1549 Mikesell St | Utilimaster |
| Plant 5 | 1055 Mikesell St | Builtmore |
| Plant 6 | 1065 Mikesell St | Builtmore |
| Plant 7 - South | 1111 Mikesell St | North half of Plant 7 South is Utilimaster<br>South half of Plant 7 South is Spartan RV Chassis/motorhomes |
| Plant 7 – North | 1111 Mikesell St | Utilimaster warehousing<br>Spartan RV Chassis aftermarket parts storage |
| Plant 9 | 909 Shepard St | Spartan RV Chassis |
| Plant 12 | 1023 Reynolds Rd | Builtmore |

**Previously, all plants owned by The Shyft Group were once part of Spartan Motors (now Spartan Fire, LLC). Spartan Fire sold Plant 1, Plant 4, Plant 5, Plant 6, Plant 7 (partial), Plant 9, and Plant 12 to The Shyft Group.**

**The Shyft Group is an opt-out facility for HAPs. The opt-out permit consists of EUCOATING, EU003, EU004, EU005, and EU006, which are all installed within Utilimaster buildings.**

## Inspection

**At approximately 8:30 a.m. on July 21, 2021, I arrived at Utilimaster Plant 4 and met with Mark Tack, Manager of Manufacturing and Engineering for Utilimaster. The inspection of Builtmore, Spartan RV Chassis, and Royal Truck Body was conducted thereafter at ~11:30 a.m. with Ryan Lowe EHS Coordinator for Builtmore, Spartan RV Chassis and Royal Truck Body, and Steve Curry, EHS Director.**

**When I arrived at Utilimaster Plant 4 I detected level 2 paint odors south of Plant 7. According to historical weatherunderground data, winds were out of the NE at 0 mph; Plant 7 is the likely source of the odors. To-date the AQD has not received any complaints.**

**The equipment installed at Utilimaster was inspected per plant and is identified per plant in this report. The inspection included exempt and permitted equipment. All permitted equipment under PTI 6-21 is installed in Plant 7**

## Utilimaster Inspection

### Plant 4

**This plant consists of two mirrored lines used for assembly of delivery vehicles. All equipment throughout Plant 4 is exempt. See table below. A portion of Plant 4 is shared with Spartan RV Chassis (warehousing purposes).**

| Equipment | Description/Inspection Notes | Permit Exemption/ PTI Number | Compliance Status |
|---|---|---|---|
| Aluminum Drilling, Grinding, and Sawing | Emissions are released to the general in-plant environment. | Rule 285(2)(l)(vi) | Compliance |

### Plant 7 – South (North side)

**Plant 7 is comprised of 2 plants 7 North and 7 South. Plant 7 South contains the permitted equipment for Utilimaster (north side of Plant 7 South), as well as some operations for Spartan RV Chassis.**

| Equipment | Description | Permit Exemption/ PTI Number | Compliance Status |
|---|---|---|---|
| EUCOATING | 2 paint booths for the application of primer and topcoat to trucks with a gross vehicle weight rating greater than 8,500 lbs, including 2 natural gas-fired air makeup units and one natural gas-fired curing oven, collectively having | 6-21 | |

| | | | |
|---|---|---|---|
| | a capacity of 7.5 MMBtu/hr. Dry filters are used to control particulate from the paint booths. | | |
| EU003 | One undercoat booth using water-based coatings. | 6-21 | |
| EU004 | One paint prep booth – a wash station used to wash the bodies of the vehicles prior to priming and painting. Dried with air blowers. | 6-21 | |
| EU005 | Parts washer using solvent-based cleaner. This unit has not been installed to-date. | 6-21 | NA |
| EU006 | Fuel dispensing operations for fueling of completed trucks. Vehicles are equipped with on-board refueling vapor recovery (ORVR). | 6-21 | |
| Natural gas-fired boiler <50 MMBtu/hr | Natural gas-fired boiler used to heat the wash water for EU003 | Rule 282(2)(b)(i) | Compliance |
| 1 axle welding station | Plant 7 South. | Rule 285(2)(i) | Compliance |
| Mills, lathes, drill presses, metal shears, bandsaws, grinding | Plant 7 South. Emissions are only vented to the general in-plant environment | Rule 285(2)(l)(vi) | Compliance |
| Aluminum bending | Plant 7 South. Emissions vented to general in-plant environment | Rule 285(2)(l)(i) | Compliance |

**EUCOATING**

**EUCOATING covers two paint booths and a curing oven for the application of primer and topcoat to trucks with a gross vehicle weight (GVW) rating of greater than 8,500 lbs. Light-duty trucks are defined as those having a GVW rated at not more than 8,500 lbs. If at any time Utilimaster plans to coat trucks that are rated at a GVW of less than 8,500 lbs, the emission units will need to be re-permitted because the NSPS Subpart MM and Rule 610 will apply. I verified with M. Tack that the GVW rating for the 14' and 16' models that Utilimaster coats is just under 10,000 lbs.**

**While onsite, I verified that there are 2 curing ovens (1 per paint booth), and I will recommend that Utilimaster work with AQD Permits Section to clear up the emission unit description language that indicates there is only one curing oven).**

**Operations of this unit began in April 2021.**

***Emission Limits & Monitoring/Recordkeeping***

**VOC is limited to 44.18 tpy, and acetone and tert-butyl acetate (TBA) combined is limited to 18.27 tpy; both limits are on a 12-month rolling basis. Utilimaster is required to maintain a current listing from the manufacturer of the chemical composition of each material used in EUCOATING (MSDS, etc); the gallons with water of each material (for VOC-containing and Acetone/TBA-containing material) used; the VOC content and acetone/TBA content of each material as applied; and the monthly and 12-month rolling VOC and acetone/TBA emissions. Utilimaster currently uses Environmental Data Sheets (EDS) for their VOC content determinations and VOC emission calculations.**

**Monthly and 12-month rolling VOC emissions records were provided, as well as VOC content and density. Total VOC's from April 2021 – July 2021 is 7.02 tons.**

**Monthly acetone & TBA emissions records were also provided. Total combined acetone and TBA emissions from April – July 2021 was 4.37 tons.**

***Material Limits & Testing/Sampling***

**VOC content is limited to 3.3 lb/gal (minus water) for all topcoat coatings and 2.3 lb/gal (minus water) for all primer coatings. According to the EDS's provided, Utilimaster has one top coat that has a VOC content minus water of 3.10 lb/gal and one primer that has a VOC content minus water of 2.14 lb/gal. Utilimaster appears to be in compliance with the VOC content limits; however, AQD may sample the coatings in the future to verify that VOC content limits are as reported on the EDS.**

**Manufacturer's formulation data can be used to determine VOC content, water content and density of any coating in lieu of conducting Method 24 analyses on the coatings if written approval is granted by the AQD. Utilimaster has not yet submitted the request to use manufacturer's formulation data in lieu of conducting Method 24 analyses on their coatings. I will follow up with the company to ensure that the request for use of manufacturer's formulation data is submitted.**

***Process/Operational Restrictions***

**Utilimaster is required to capture all waste materials and store them in closed containers. During the inspection I verified that all waste containers are stored in the paint kitchen and that all containers were closed.**

**Spent paint booth filters are required to be disposed of in a manner that minimizes the introduction of air contaminants to the outer air. M. Tack explained that the filters removed from the booth and carried to rolling bins within the facility. When these bins are full they are transported inside the facility to waste gondolas. The gondolas are located outside the facility, however waste disposal/access to these containers is available from inside the plant only. All spent filters are dumped into these gondolas from inside the facility, thus the likelihood that particulate from these filters getting re-entrained into the outer air is low (see attached photo of gondola).**

***Design/Equipment Parameters***

**All exhaust filters installed in EUCOATING's two coating booths are required to be installed, maintained, and operated in a satisfactory manner. M. Tack explained that there are high efficiency filters underneath primary filters (the filters that can be seen from inside the booth). He said the primary filters are changed out weekly and**

**offer protection to the more expensive high-efficiency filters underneath. I was able to verify in one of the two paint booths that the filters were installed properly (no gaps between the filters and the exhaust opening). The other booth was in-use during the inspection.**

**The applicators in the EUCOATING booths are required to be HVLP or comparable technology. M. Tack provided vendor documentation stating that the applicators are HVLP (will not exceed 10 psig). Future inspections may require Utilimaster to use pressure test caps to confirm this, but because these operations are new, the HVLP applicators are expected to be in fairly new and functional condition.**

***Reporting***

**Within 30 days after completion of the installation of EUCOATING, Utilimaster was required to submit notification of completion of the installation. M. Tack provided this notification after the inspection (the report is late because it was not submitted within 30 days of installation completion). Completion of installation of the booths occurred on April 16 and April 30, 2021.**

***Stack/Vent Restrictions***

**EUCOATING was permitted with 5 stacks (SV001a, SV001b, SV002a, SV002b, and SV0002c). I confirmed with M. Tack that there are a total of 4 exhaust stacks for each paint booth (8 total), and 2 curing oven exhaust stacks (one for each oven). I will work with Utilimaster to ensure that the permit is modified to reflect the appropriate number of stacks.**

**EU003 – Undercoat Booth**

**EU003 is for one undercoat booth that uses water-based coatings. The permit describes emissions control as dry filters that exhaust into the in-plant environment. During the inspection I confirmed with M. Tack that emissions are controlled with portable dry filters controls only when the bay door is closed. When the bay door is open, the dry filters are not used. The "booth" itself is enclosed in 2 sides of plastic sheeting. The other 2 sides are open to the in-plant environment. I expressed my concerns with M. Tack that when the bay doors are open, particulate is not being captured in the in-plant environment, and requested that the two open sides of the "booth" also be enclosed with plastic sheeting to ensure particulate is maintained within an enclosed space when the bay door is open. M. Tack said he would ensure plastic sheeting is installed on the other 2 sides and provide followup via photos when this occurs.**

**There are no Emission Limits or Process/Operational Restrictions for EU003 at this time.**

***Material Limits, Testing/Sampling & Monitoring/Recordkeeping***

**VOC content of coatings used in this booth shall not have a VOC content greater than 0.001% by weight. Utilimaster is required to keep a listing of the chemical composition of each material used in EU003, including the weight percent of each component.**

**Cameron Watson, Utilimaster EHS Director, said there is only 1 coating used in this booth: Z Guard 9902M. He provided the SDS which states tht the VOC content of this coating is 0 lb/gal. Manufacturer's formulation data can**

**be used to determine VOC content, water content and density of any coating in lieu of conducting Method 24 analyses on the coatings if written approval is granted by the AQD. Utilimaster has not yet submitted the request to use manufacturer's formulation data in lieu of conducting Method 24 analyses on their undercoat coatings. The SDS is not an acceptable way to determine VOC content, particularly a VOC content equal to or less than 0.001% by weight (SDS will not show this data). I will follow up with the company to ensure that the manufacturer's formulation data request is submitted, as well as ensure that they provide a manufacturer's formulation data for this requirement in the future.**

***Design/Equipment Parameters***

**All exhaust filters are required to be installed, maintained, and operated in a satisfactory manner. The in-plant exhaust filtration systems are portable and were not being utilized during the inspection while undercoat painting was occurring because the bay door was open. I have informed the company that the particulate control devices should be used, particularly when the bay door is open to ensure proper control and collection of paint particulate.**

**The applicators in the EU003 station are required to be HVLP or comparable technology. M. Tack provided vendor documentation stating that the applicators are HVLP (will not exceed 10 psig). Future inspections may require Utilimaster to use pressure test caps to confirm the pressure on the applicators.**

***Reporting***

**Within 30 days after completion of the installation of EU003, Utilimaster was required to submit notification of completion of the installation. M. Tack provided this notification after the inspection (the report is late because it was not submitted within 30 days of installation completion). Completion of installation of the undercoat station occurred on April 16, 2021.**

***Stack/Vent Restrictions***

**Exhaust gases from EU003 are not to be directly discharged to the ambient air at any time. There is no stack for EU003. All emissions are vented to the in-plant environment, except for when the bay door is open, where there is the potential for emissions to leave the plant and enter ambient air. The plastic sheeting on the two ends should aid in preventing particulate from leaving the plant, in addition to operating the fabric filters at all times.**

**<u>EU004 – Paint prep (wash) booth and blow-drying system</u>**

**The permit describes this unit as one paint prep booth and a 2.5 MMBtu/hr natural gas-fired dry off oven. During the inspection, M. Tack and I verified that paint prep essentially means washing of the vehicles in a wash station. There is no oven used to dry the vehicles for this emission unit; the vehicles are dried with electric-powered air blowers. There is a boiler that is used to heat the water for this process.**

**M. Tack said that he believes the inconsistencies between how Utilimaster was permitted and how it was built is due to an error with August Mack's application materials – he believes the application used for another Shyft Group site was sent over to AQD for permit review for this site. I will request that the company modify the permit to reflect actual operations for this emission unit, as well as others where installation did not match what was permitted.**

**There are currently no Emission Limits, Material Limits, Process/Operational Restrictions, Design/Equipment Parameters, or Testing/Sampling requirements for EU004.**

***Monitoring/Recordkeeping***

**Utilimaster is required to keep a current listing from the manufacturer of the chemical composition of each material used in EU004, including the weight percent of each component; SDS are acceptable. M. Tack provided me with the Bonderite Alkaline cleaners (Bonderite C-AK NP-2 and Bonderite M-NT 5700) used in the wash station, attached.**

***Reporting***

**Within 30 days after completion of the installation of EU003, Utilimaster was required to submit notification of completion of the installation. M. Tack provided this notification after the inspection (the report is late because it was not submitted within 30 days of installation completion). Completion of installation of the undercoat station occurred on April 16, 2021.**

**EU005 – cold cleaner with solvent-based cleaner**

**This unit has not been installed. I have recommended to the company to submit a permit modification to remove this emission unit if Utilimaster does not plan to install one of these units.**

**EU006 – Fuel Dispensing Operations for vehicles with ORVR**

**This covers all fuel dispensing operations for light-duty trucks with a gross vehicle weight of greater than 8,500 lbs that have on-board refueling vapor recovery (ORVR).**

**There are currently no Emission Limits, Material Limits, Process/Operational Restrictions, Testing/Sampling, or Reporting requirements.**

**Utilimaster is permitted to fuel vehicles that have ORVR systems. M. Tack confirmed for me that all vehicles fueled have ORVR systems. He said that these are standard with all vehicles.**

## FGFACILITY

**FGFACILITY covers all HAP-emitting equipment at Utilimaster, including all permitted, exempt and grandfathered equipment. HAP emissions from Builtmore, Spartan RV Chassis, and Royal Truck Body are also required to be included in these emissions. At this time, based on the information gathered during the inspection, it does not appear that Builtmore, Spartan RV Chassis or Royal Truck Body have any equipment that would emit a HAP at this time.**

**There are currently no Material Limits, Process/Operational Restrictions, Design/Equipment Parameters, or Reporting requirements for FGFACILITY.**

***Emission Limits, Testing/Sampling, & Monitoring/Recordkeeping***

**The stationary source is limited to less than 8.9 tpy for each individual HAP and less than 22.4 tpy for aggregate HAP on a 12-month rolling basis. The source is required to determine HAP content using manufacturer's formlulation data and to calculate individual and aggregate HAP emissions on a monthly and 12-month rolling basis based on gallons or pounds of each HAP-containing material used and the HAP content of each material. EDS were used as the manufacturer's formulation data to determine HAP content (via wt% and density of coating).**

**Operations started in April 2021. The individual aggregate HAP with the highest emissions from April – July 2021 was methyl isobutyl ketone (MIBK) at 0.45 tons. Total aggregate HAP for the period of April – July 2021 was 0.96 tons. The stationary source is in compliance with their HAPs opt-out limits at this time.**

### Compliance Statement

**Utilimaster is in compliance with PTI 6-21 at this time. Work needs to be done on Utilimaster's part to modify the permit, as described throughout this report.**

## Builtmore/Spartan RV Chassis/Royal Truck Body Inspection

**Ryan Lowe accompanied me on the inspection for all Builtmore, Spartan RV Chassis, and Royal Truck Body compliance checks.**

### Plant 1 – Spartan RV Chassis, Royal Truck Body/Duramag

**Plant 1 consists of a Service Center for damaged vehicles (RV's, firetrucks, etc), as well as a Training Center for RV Owners. It also consists of a small bay area used to add work beds to various types of truck bodies (Royal Truck Body/Duramag business).**

| Equipment | Description/Inspection Notes | Permit Exemption | Compliance Status |
|---|---|---|---|
| One parts washer | Parts washer with a surface area less than 10 $ft^2$. Lid was closed, as required by Part 7 rules. Operating instructions were present on the unit.<br><br>Crystal Clean Stoddard solvent is used in this unit and the unit is serviced by Crystal Clean (see attached for SDS). | Rule 281(2)(h) | Compliance |

## Plant 5 - Builtmore

**This plant is strictly allocated for the Isuzu N-gas production which involves assembly of the truck via torque tools and air tools to marry the chassis to the cab of the truck.**

| Equipment | Description/Inspection Notes | Permit Exemption/ PTI Number | Compliance Status |
|---|---|---|---|
| Engine test stand dynamometer | Used for testing gasoline engine trucks, the exhaust systems are already equipped with catalytic converters and onboard vapor recovery systems when they go into this test stand .<br><br>The units tested on these test stands are considered mobile sources, particularly since the emission control systems are already equipped prior to testing.<br><br>The Air Quality Division does not regulate mobile sources of air pollutants and therefore emissions from this unit should not be incorporated into FGFACILITY emissions. | NA | NA |
| Gas-filling station | 59-gallon capacity used to fill vehicles prior to testing | Rule 284(2)(g)(iii) | Compliance |

## Plant 6 - Builtmore

**This plant is the PIO (Port Installed Options) building for the F- and N-series Isuzu trucks (placing final materials on trucks), such as radios and mirrors. It also houses inventory of aftermarket parts.**

**There are is no exempt or permitted equipment contained within this building.**

## Plant 7

**Plant 7 north houses Spartan RV Chassis aftermarket parts storage. Plant 7 south houses Spartan RV Chassis motorhome operations. Chassis frames are brought in and assembled, fuel tanks are installed, and the chassis are fueled in this building to be DVT tested at Spartan Fire's DVT booth.**

**There are no exempt or permitted pieces of equipment in Plant 7 for Builtmore, Spartan RV Chassis, or Royal Truck Body at this time.**

## Plant 9 - Builtmore

**Plant 9 is used as a Research and Development facility for motorhome improvements. It opened in September 2020.**

**There are no permitted or exempt pieces of equipment located in this building at this time.**

## Plant 12 - Builtmore

**Plant 12 is dedicated entirely to the assembly of F-series Isuzu trucks by marrying the chassis to the cabs, assembling the exhaust systems, and dynamometer testing on all the finished units. Production in this plant was put on hold in March or April of 202, but there are plans to start up again in September 2021.**

**Repairs on brackets, torque valves, etc, for the N-gas Isuzu trucks also take place in this plant.**

**There is no permitted or exempt equipment in Plant 12 at this time.**

| Equipment | Description/Inspection Notes | Permit Exemption/ PTI Number | Compliance Status |
|---|---|---|---|
| Chassis Rolling Diesel Dynamometer test stand | Bay area where roller dynamometer testing is conducted.<br><br>Used for testing of completed Isuzu diesel trucks; the exhaust systems are already equipped with emissions control systems that convert the diesel exhaust to nitrogen compounds.<br><br>The units tested on these test stands are considered mobile sources, particularly since the emission control systems are already equipped prior to testing. Exhaust from these tests are ducted from the emissions point out through the roof.<br><br>The Air Quality Division does not regulate mobile sources of air pollutants and therefore emissions from this unit should not be incorporated into FGFACILITY emissions. | NA | Compliance |

**Compliance statement**

**Builtmore, Spartan RV Chassis, and Royal Truck Body are in compliance at this time.**

**Image 1(Paint Prep) :** Paint Prep wash station

**Image 2(Boiler) :** Boiler used to heat the wash water in the paint prep wash booth

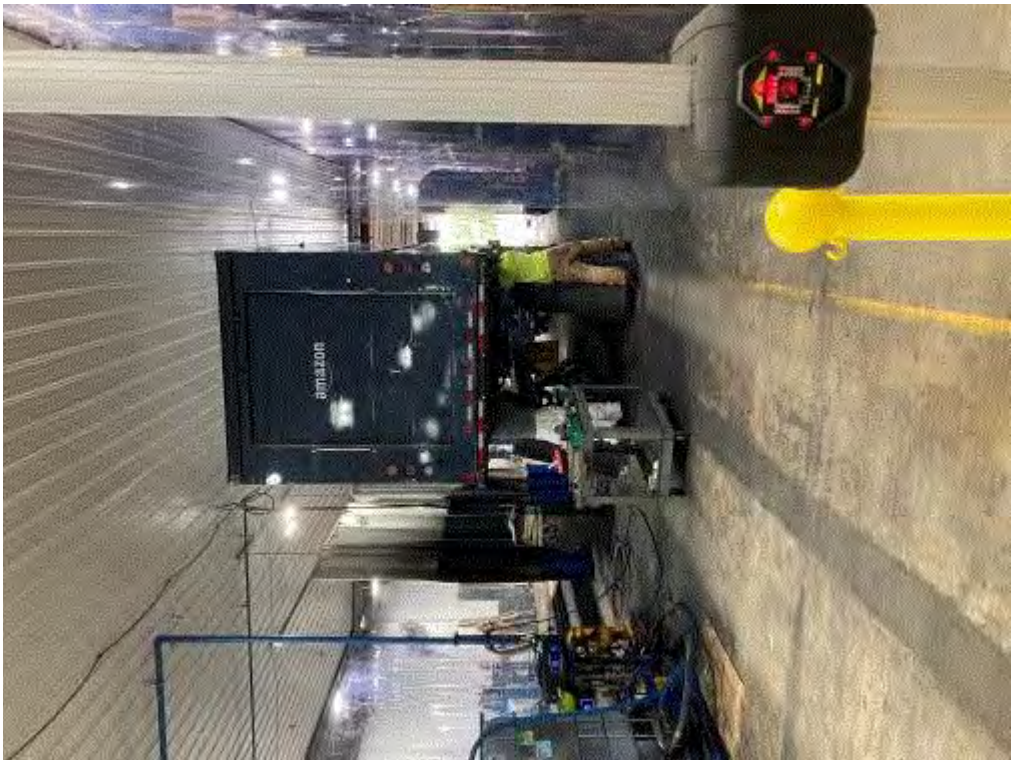


**Image 3(Undercoat) :** Undercoat "booth" area. Note plastic sheeting on either side and bay door open. Plastic sheeting to be installed on front and rear also.


**Image 4(Garbage gondola) :** Garbage gondola, disposal of waste occurs from inside plant.

NAME Michelle Luplow DATE 8/24/21 SUPERVISOR B.M.


W Shepherd St
W Shepherd St
Plant 9
Reynolds Rd
Builtmore Contract Manufacturing (Plant 5)
Peckham
Builtmore Contract Manufacturing (Plant 6)
Spartan RV Chassis (Plant 1)
Plant 12
Spartan RV Chassis & Utilimaster (Plant 7)
Reynolds Rd
Spartan Emergency Response - Plant 2
Utilimaster - Charlotte Operations (Plant 4)
Spartan Fire LLC (Plant 8)
Google

**Revision Number:** 004.9

**Issue date:** 08/12/2020

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** **BONDERITE M-NT 5700 CR FREE CONVERSION COATING known as ALODINE 5700**

**IDH number:** 598422

**Product type/use:** Coating

**Restriction of Use:** None identified

**Region:** United States

**Company address:**
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

**Contact information:**
Telephone: +1 (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center
1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC
1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

## 2. HAZARDS IDENTIFICATION

| EMERGENCY OVERVIEW |
|---|
| NOT CLASSIFIED. READ ENTIRE SAFETY DATA SHEET. |

| HAZARD CLASS | HAZARD CATEGORY |
|---|---|
| None | None |

| PICTOGRAM(S) |
|---|
| None |

**Precautionary Statements**

**Prevention:** Not prescribed
**Response:** Not prescribed
**Storage:** Not prescribed
**Disposal:** Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**See Section 11 for additional toxicological information.**

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number | Percentage* |
|---|---|---|
| None | None | None |

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

## 4. FIRST AID MEASURES

**Inhalation:** If inhaled, immediately remove the affected person to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** Immediately flush skin with plenty of water (using soap, if available). If symptoms develop and persist, get medical attention.

**Eye contact:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Ingestion:** Get immediate medical attention. Do not induce vomiting.

**Symptoms:** See Section 11.

**Notes to physician:** Treat symptomatically and supportively.

## 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Use media appropriate for surrounding material.

**Special firefighting procedures:** Wear full protective clothing. Wear self-contained breathing apparatus.

**Unusual fire or explosion hazards:** Not a fire hazard.

**Hazardous combustion products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

## 6. ACCIDENTAL RELEASE MEASURES

**Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.**

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Do not allow product to enter sewer or waterways.

**Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal. Dispose of according to Federal, State and local governmental regulations.

## 7. HANDLING AND STORAGE

**Handling:** Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Do not take internally. For industrial use only.

**Storage:** For safe storage, store between 40 °F (4.4 °C) and 100 °F (37.8 °C)
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Protect from freezing.

**For information on product shelf life, please review labels on container or check the Technical Data Sheet.**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.**

| Hazardous Component(s) | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|---|---|---|---|---|
| None | None | None | None | None |

**Engineering controls:** Ventilation should effectively remove and prevent buildup of any vapor/mist/fume/dust generated from the handling of this product.

**Respiratory protection:** If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.

**Eye/face protection:** Safety goggles or safety glasses with side shields.

**Skin protection:** Wear impervious gloves for prolonged contact. Use of impervious apron and boots are recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid
**Color:** Yellow
**Odor:** Mild
**Odor threshold:** Not available.
**pH:** 2.3 - 2.5
**Vapor pressure:** Not determined
**Boiling point/range:** > 100 °C (> 212°F)

| | |
|---|---|
| **Melting point/ range:** | Not determined |
| **Specific gravity:** | 1.00 - 1.011 at 15.6 °C (60.08 °F) |
| **Vapor density:** | Not determined |
| **Flash point:** | Not applicable |
| **Flammable/Explosive limits - lower:** | Not applicable |
| **Flammable/Explosive limits - upper:** | Not applicable |
| **Autoignition temperature:** | Not available. |
| **Flammability:** | Not applicable |
| **Evaporation rate:** | Not available. |
| **Solubility in water:** | Complete |
| **Partition coefficient (n-octanol/water):** | Not available. |
| **VOC content:** | < 0.2 % Estimated |
| **Viscosity:** | Not available. |
| **Decomposition temperature:** | Not available. |

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions.

**Hazardous reactions:** None under normal processing.

**Hazardous decomposition products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

**Incompatible materials:** This product may react with strong acids, bases and oxidizing agents.

**Reactivity:** Not available.

**Conditions to avoid:** Keep away from heat, ignition sources and incompatible materials.

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects/Symptoms**

| | |
|---|---|
| **Inhalation:** | Inhalation of vapors or mists of the product may be irritating to the respiratory system. |
| **Skin contact:** | Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis. |
| **Eye contact:** | This product may cause irritation to the eyes. |
| **Ingestion:** | May cause gastrointestinal irritation with nausea, vomiting and diarrhea. |

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|---|---|---|
| None | None | None |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---|---|---|---|
| None | None | None | None |

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Do not empty into drains, soil or bodies of water.

## 13. DISPOSAL CONSIDERATIONS

**Information provided is for unused product only.**

**Recommended method of disposal:** Dispose of according to Federal, State and local governmental regulations.

**Hazardous waste number:** Material, if discarded, is not expected to be a characteristic hazardous waste under RCRA. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

## 14. TRANSPORT INFORMATION

**The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.**

**U.S. Department of Transportation Ground (49 CFR)**

**Proper shipping name:** Not regulated
**Hazard class or division:** None
**Identification number:** None
**Packing group:** None

**International Air Transportation (ICAO/IATA)**

**Proper shipping name:** Not regulated
**Hazard class or division:** None
**Identification number:** None
**Packing group:** None

**Water Transportation (IMO/IMDG)**

**Proper shipping name:** Not regulated
**Hazard class or division:** None
**Identification number:** None
**Packing group:** None

## 15. REGULATORY INFORMATION

**United States Regulatory Information**

**TSCA 8 (b) Inventory Status:** All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

**TSCA 12 (b) Export Notification:** None above reporting de minimis

**CERCLA/SARA Section 302 EHS:** None above reporting de minimis.
**CERCLA/SARA Section 311/312:** None
**CERCLA/SARA Section 313:** None above reporting de minimis.

**California Proposition 65:** This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**Canada Regulatory Information**

**CEPA DSL/NDSL Status:** One or more components are not listed on, and are not exempt from listing on either the Domestic Substances List or the Non-Domestic Substances List.

## 16. OTHER INFORMATION

**This safety data sheet contains changes from the previous version in sections:** Reviewed SDS. Reissued with new date.

**Prepared by:** Product Safety and Regulatory Affairs

**Issue date:** 08/12/2020

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.

**Revision Number:** 001.2

**Issue date:** 06/10/2020

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** **BONDERITE C-AK NP-2**
**Product type/use:** Cleaners for Industrial Application
**Restriction of Use:** None identified
**Company address:**
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

**IDH number:** 1980888
**Item number:** 1980888
**Region:** United States
**Contact information:**
Telephone: +1 (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center
1-877-671-4608 (toll free) or 1-303-592-1711
TRANSPORT EMERGENCY Phone: CHEMTREC
1-800-424-9300 (toll free) or 1-703-527-3887
Internet: www.henkelna.com

## 2. HAZARDS IDENTIFICATION

| EMERGENCY OVERVIEW | |
|---|---|
| DANGER: | CAUSES SEVERE SKIN BURNS AND EYE DAMAGE. |

| HAZARD CLASS | HAZARD CATEGORY |
|---|---|
| SKIN CORROSION | 1B |
| SERIOUS EYE DAMAGE | 1 |

**PICTOGRAM(S)**

**Precautionary Statements**

**Prevention:** Wash affected area thoroughly after handling. Wear protective gloves, clothing, eye and face protection.

**Response:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Wash contaminated clothing before reuse.

**Storage:** Store locked up.

**Disposal:** Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

2 % of the mixture consists of ingredient(s) of unknown acute toxicity.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**See Section 11 for additional toxicological information.**

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Hazardous Component(s) | CAS Number | Percentage* |
|---|---|---|
| Sodium silcate | 1344-09-8 | 5 - 10 |
| Potassium hydroxide | 1310-58-3 | 1 - 5 |
| Sodium nitrate | 7631-99-4 | 1 - 5 |

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

## 4. FIRST AID MEASURES

**Inhalation:** If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms develop and persist, get medical attention.

**Skin contact:** For skin contact, flush with large amounts of water. Seek immediate medical attention. Remove contaminated clothing and footwear.

**Eye contact:** In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.

**Ingestion:** Get medical attention. DO NOT induce vomiting unless directed to do so by medical personnel. Give one to two glasses of water or milk. Never give anything by mouth to a victim who is unconscious or is having convulsions.

**Symptoms:** See Section 11.

## 5. FIRE FIGHTING MEASURES

**Extinguishing media:** Water spray (fog), foam, dry chemical or carbon dioxide.

**Special firefighting procedures:** Wear full protective clothing. Wear self-contained breathing apparatus.

**Unusual fire or explosion hazards:** May liberate large quantities of dense, foul-smelling smoke which may contain unidentified toxic gasses.

**Hazardous combustion products:** Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

## 6. ACCIDENTAL RELEASE MEASURES

**Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.**

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Wear appropriate protective equipment and clothing during clean-up. Block any potential routes to water systems.

**Clean-up methods:** Absorb spill with inert material. Shovel material into appropriate container for disposal.

## 7. HANDLING AND STORAGE

**Handling:** Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. For industrial use only.

**Storage:** For safe storage, store between 0 °C (32°F) and 49 °C (120.2 °F)
Keep container tightly closed and in a cool, well-ventilated place away from incompatible materials. Thaw and mix thoroughly if frozen.

**For information on product shelf life, please review labels on container or check the Technical Data Sheet.**

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.**

| Hazardous Component(s) | ACGIH TLV | OSHA PEL | AIHA WEEL | OTHER |
|---|---|---|---|---|
| Sodium silcate | None | None | None | None |
| Potassium hydroxide | 2 mg/m3 Ceiling | None | None | None |
| Sodium nitrate | None | None | None | None |

**Engineering controls:** Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

| | |
|---|---|
| **Respiratory protection:** | If ventilation is not sufficient to effectively prevent buildup of aerosols, mists or vapors, appropriate NIOSH/MSHA respiratory protection must be provided. |
| **Eye/face protection:** | Wear chemical goggles; face shield (if splashing is possible). |
| **Skin protection:** | Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron and boots are recommended. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical state:** | Liquid |
| **Color:** | Water white |
| **Odor:** | Surfactant |
| **Odor threshold:** | Not available. |
| **pH:** | 13.6 |
| **Vapor pressure:** | Not determined |
| **Boiling point/range:** | > 100 °C (> 212°F)calculated |
| **Melting point/ range:** | Not determined |
| **Specific gravity:** | 1.14 |
| **Vapor density:** | Not determined |
| **Flash point:** | Not applicable |
| **Flammable/Explosive limits - lower:** | Not applicable |
| **Flammable/Explosive limits - upper:** | Not applicable |
| **Autoignition temperature:** | Not applicable |
| **Flammability:** | Not applicable |
| **Evaporation rate:** | Not available. |
| **Solubility in water:** | Complete |
| **Partition coefficient (n-octanol/water):** | Not determined |
| **VOC content:** | 3 % (calculated) |
| **Viscosity:** | 9 mPa.s |
| **Decomposition temperature:** | Not available. |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Stability:** | Stable at normal conditions. |
| **Hazardous reactions:** | Will not occur. |
| **Hazardous decomposition products:** | Upon decomposition, this product may yield oxides of nitrogen and ammonia, carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons. |
| **Incompatible materials:** | This product reacts with acids. |
| **Reactivity:** | Not available. |
| **Conditions to avoid:** | None identified. |

## 11. TOXICOLOGICAL INFORMATION

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects/Symptoms**

**Inhalation:** Mists, vapors or liquid may cause severe irritation or burns.
**Skin contact:** Corrosive to the skin. Contact with the skin or mucous membranes may cause severe irritation and burns.
**Eye contact:** This product is severely irritating to the eyes and may cause irreversible damage including burns and blindness.
**Ingestion:** This product may produce corrosive damage to the gastrointestinal tract if it is swallowed.

| Hazardous Component(s) | LD50s and LC50s | Immediate and Delayed Health Effects |
|---|---|---|
| Sodium silcate | Oral LD50 (Mouse) = 1,100 mg/kg<br>Oral LD50 (Rat) = 1,100 - 1,600 mg/kg<br>Oral LD50 (Mouse) = 1,100 mg/kg<br>Oral LD50 (Rat) = 1.1 g/kg | Corrosive, Irritant |
| Potassium hydroxide | Oral LD50 (Rat) = 273 mg/kg<br>Oral LD50 (Rat) = 1.23 g/kg | Corrosive, Irritant |
| Sodium nitrate | Oral LD50 (Rat) = 1,267 mg/kg | Blood, Central nervous system, Corrosive, Gastrointestinal, Irritant |

| Hazardous Component(s) | NTP Carcinogen | IARC Carcinogen | OSHA Carcinogen (Specifically Regulated) |
|---|---|---|---|
| Sodium silcate | No | No | No |
| Potassium hydroxide | No | No | No |
| Sodium nitrate | No | No | No |

## 12. ECOLOGICAL INFORMATION

**Ecological information:** Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

## 13. DISPOSAL CONSIDERATIONS

**Information provided is for unused product only.**

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal. This product contains a chelating agent.

**Hazardous waste number:** This product, if discarded directly, would be a characteristic RCRA corrosive waste (D002).

## 14. TRANSPORT INFORMATION

**The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.**

**U.S. Department of Transportation Ground (49 CFR)**
**Proper shipping name:** Potassium hydroxide, solution
**Hazard class or division:** 8
**Identification number:** UN 1814
**Packing group:** II
**DOT Hazardous Substance(s):** Potassium hydroxide

**International Air Transportation (ICAO/IATA)**
**Proper shipping name:** Potassium hydroxide solution
**Hazard class or division:** 8
**Identification number:** UN 1814
**Packing group:** II

**Water Transportation (IMO/IMDG)**
**Proper shipping name:** POTASSIUM HYDROXIDE SOLUTION
**Hazard class or division:** 8
**Identification number:** UN 1814
**Packing group:** II

## 15. REGULATORY INFORMATION

**United States Regulatory Information**

| | |
|---|---|
| **TSCA 8 (b) Inventory Status:** | All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory. |
| **TSCA 12 (b) Export Notification:** | None above reporting de minimis |
| **CERCLA/SARA Section 302 EHS:** | None above reporting de minimis. |
| **CERCLA/SARA Section 311/312:** | Immediate Health |
| **CERCLA/SARA Section 313:** | This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Sodium nitrate (CAS# 7631-99-4). |
| **CERCLA Reportable quantity:** | Potassium hydroxide (CAS# 1310-58-3) 1,000 lbs. (454 kg) |
| **California Proposition 65:** | This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. |

**Canada Regulatory Information**

| | |
|---|---|
| **CEPA DSL/NDSL Status:** | All components are listed on or are exempt from listing on the Canadian Domestic Substances List. |

## 16. OTHER INFORMATION

**This safety data sheet contains changes from the previous version in sections:** New Material Safety Data Sheet format.

**Prepared by:** Regulatory Affairs

**Issue date:** 06/10/2020

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.

# SAFETY DATA SHEET

## 1. Identification

| | |
|---|---|
| **Product identifier** | **Crystal Clean 106 Mineral Spirits** |
| **Other means of identification** | None. |
| **Recommended use** | Degreasing/Cleaning |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

| | | |
|---|---|---|
| **Company name** | Heritage-Crystal Clean, LLC | |
| **Address** | 2175 Point Boulevard Suite 375<br>Elgin, IL 60123-9211 | |
| **Telephone** | Technical Questions | 877-938-7948 |
| **Website** | www.crystal-clean.com | |
| **E-mail** | cc_ehs@crystal-clean.com | |
| **Emergency phone number** | Chemtrec | 800-424-9300 |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 3 |
| **Health hazards** | Serious eye damage/eye irritation | Category 2A |
| | Carcinogenicity | Category 2 |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| **Environmental hazards** | Hazardous to the aquatic environment, acute hazard | Category 2 |

**OSHA defined hazards** Not classified.

**Label elements**

| | |
|---|---|
| **Signal word** | Warning |
| **Hazard statement** | Flammable liquid and vapor. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Toxic to aquatic life. |

**Precautionary statement**

| | |
|---|---|
| **Prevention** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |
| **Response** | If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed or concerned: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish. |
| **Storage** | Store in a well-ventilated place. Keep container tightly closed. Store locked up. Keep cool. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

**Substances**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Stoddard solvent | | 8052-41-3 | 100 |

**Constituents**

| Chemical name | CAS number | % |
|---|---|---|
| Nonane | 111-84-2 | 1 - < 6 |
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.8 - 4 |
| Trimethylbenzene | 25551-13-7 | 0.1 - 0.8 |
| Toluene | 108-88-3 | ≤ 0.8 |
| Naphthalene | 91-20-3 | ≤ 0.4 |
| Ethylbenzene | 100-41-4 | ≤ 0.4 |

**Composition comments** Occupational Exposure Limits for constituents are listed in Section 8.

## 4. First-aid measures

**Inhalation** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

**Skin contact** Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**Ingestion** Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

**Most important symptoms/effects, acute and delayed** May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information** Take off all contaminated clothing immediately. If exposed or concerned, get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

## 5. Fire-fighting measures

**Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical** Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions** In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** Flammable liquid and vapor.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid inhalation of vapors and spray mists. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Type | Value |
|---|---|---|
| Stoddard solvent (CAS 8052-41-3) | PEL | 2900 mg/m3 |
| | | 500 ppm |
| **Constituents** | **Type** | **Value** |
| Ethylbenzene (CAS 100-41-4) | PEL | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | PEL | 50 mg/m3 |
| | | 10 ppm |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Constituents | Type | Value |
|---|---|---|
| Toluene (CAS 108-88-3) | Ceiling | 300 ppm |
| | TWA | 200 ppm |

**US. ACGIH Threshold Limit Values**

| Components | Type | Value |
|---|---|---|
| Stoddard solvent (CAS 8052-41-3) | TWA | 100 ppm |
| **Constituents** | **Type** | **Value** |
| Ethylbenzene (CAS 100-41-4) | TWA | 20 ppm |
| Naphthalene (CAS 91-20-3) | TWA | 10 ppm |

**US. ACGIH Threshold Limit Values**

| Constituents | Type | Value |
|---|---|---|
| Trimethylbenzene (CAS 25551-13-7) | TWA | 25 ppm |
| Toluene (CAS 108-88-3) | TWA | 20 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 25 ppm |
| Nonane (CAS 111-84-2) | TWA | 200 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components | Type | Value |
|---|---|---|
| Stoddard solvent (CAS 8052-41-3) | Ceiling | 1800 mg/m3 |
| | TWA | 350 mg/m3 |

| Constituents | Type | Value |
|---|---|---|
| Ethylbenzene (CAS 100-41-4) | STEL | 545 mg/m3 |
| | | 125 ppm |
| | TWA | 435 mg/m3 |
| | | 100 ppm |
| Naphthalene (CAS 91-20-3) | STEL | 75 mg/m3 |
| | | 15 ppm |
| | TWA | 50 mg/m3 |
| | | 10 ppm |
| Trimethylbenzene (CAS 25551-13-7) | TWA | 125 mg/m3 |
| | | 25 ppm |
| Toluene (CAS 108-88-3) | STEL | 560 mg/m3 |
| | | 150 ppm |
| | TWA | 375 mg/m3 |
| | | 100 ppm |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | TWA | 125 mg/m3 |
| | | 25 ppm |
| Nonane (CAS 111-84-2) | TWA | 1050 mg/m3 |
| | | 200 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Constituents | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Ethylbenzene (CAS 100-41-4) | 0.15 g/g | Sum of mandelic acid and phenylglyoxylic acid | Creatinine in urine | * |
| Toluene (CAS 108-88-3) | 0.3 mg/g | o-Cresol, with hydrolysis | Creatinine in urine | * |
| | 0.03 mg/l | Toluene | Urine | * |
| | 0.02 mg/l | Toluene | Blood | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

| | |
|---|---|
| Naphthalene (CAS 91-20-3) | Can be absorbed through the skin. |
| Toluene (CAS 108-88-3) | Can be absorbed through the skin. |

**US - Minnesota Haz Subs: Skin designation applies**

| | |
|---|---|
| Toluene (CAS 108-88-3) | Skin designation applies. |

**US ACGIH Threshold Limit Values: Skin designation**

| | |
|---|---|
| Naphthalene (CAS 91-20-3) | Can be absorbed through the skin. |

| | |
|---|---|
| **Appropriate engineering controls** | Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product. |

**Individual protection measures, such as personal protective equipment**

| | |
|---|---|
| **Eye/face protection** | Wear chemical splash goggles. Ensure that eyewash stations and safety showers are proximal to the work-station location. |
| **Skin protection** | |
| **Hand protection** | Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. |
| **Skin protection** | |
| **Other** | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. |
| **Respiratory protection** | If engineering controls do not maintain airborne concentrations at a level that is adequate to protect worker health, a NIOSH/MISHA approved air supplied respirator must be worn in accordance with the OSHA respiratory standard. |
| **Thermal hazards** | Wear appropriate thermal protective clothing, when necessary. |
| **General hygiene considerations** | When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. |

## 9. Physical and chemical properties

| | |
|---|---|
| **Appearance** | Clear liquid with blue tint. |
| **Physical state** | Liquid. |
| **Form** | Liquid. |
| **Color** | Clear, blue. |
| **Odor** | Hydrocarbon-like. |
| **Odor threshold** | Not available. |
| **pH** | Not available. |
| **Melting point/freezing point** | -65°C to -25°C |
| **Initial boiling point and boiling range** | 300 - 419 °F (148.89 - 215 °C) |
| **Flash point** | > 106.0 °F (> 41.1 °C) Tag Closed Cup |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Not applicable. |

**Upper/lower flammability or explosive limits**

| | |
|---|---|
| **Flammability limit - lower (%)** | Not available. |
| **Flammability limit - upper (%)** | Not available. |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | < 1 mm Hg at 20°C |
| **Vapor density** | > 1 [Air = 1] |
| **Relative density** | 0.78 - 0.79 |
| **Solubility(ies)** | |
| **Solubility (water)** | Insoluble |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | Not available. |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |
| **Other information** | |
| **Explosive properties** | Not explosive. |

| | |
|---|---|
| **Oxidizing properties** | Not oxidizing. |
| **VOC** | 100 % |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous decomposition products** | No hazardous decomposition products are known. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause respiratory tract irritation. |
| **Skin contact** | Under normal conditions of intended use, this product does not pose a skin hazard. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Expected to be a low ingestion hazard. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. |

**Information on toxicological effects**

**Acute toxicity** Narcotic effects. May cause respiratory irritation.

| Product | Species | Test Results |
|---|---|---|
| Crystal Clean 106 Mineral Spirits (CAS Mixture) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3000 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | > 5 mg/kg, 4 Hours |
| *Oral* | | |
| LD50 | Rat | > 5000 mg/kg |
| **Constituents** | **Species** | **Test Results** |
| Ethylbenzene (CAS 100-41-4) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | 15400 mg/kg |
| *Inhalation* | | |
| LC50 | Rat | 17.4 mg/l, 4 hours |
| *Oral* | | |
| LD50 | Rat | 3500 - 4700 mg/kg |
| Naphthalene (CAS 91-20-3) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 2 g/kg |
| *Oral* | | |
| LD50 | Rat | 490 mg/kg |

| Constituents | Species | Test Results |
|---|---|---|
| Toluene (CAS 108-88-3) | | |
| **Acute** | | |
| *Inhalation* | | |
| LC50 | Rat | 8000 mg/l, 4 Hours |
| *Oral* | | |
| LD50 | Rat | 2.6 g/kg |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | |
| **Acute** | | |
| *Dermal* | | |
| LD50 | Rabbit | > 3160 mg/kg |
| *Inhalation* | | |
| LD50 | Rat | 18000 ppm, 4 hours |
| *Oral* | | |
| LD50 | Rat | 2720 - 3960 mg/kg |

**Skin corrosion/irritation** Not expected to be a primary skin irritant.

**Serious eye damage/eye irritation** Causes serious eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** Suspected of causing cancer.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

| | |
|---|---|
| Ethylbenzene (CAS 100-41-4) | 2B Possibly carcinogenic to humans. |
| Naphthalene (CAS 91-20-3) | 2B Possibly carcinogenic to humans. |
| Stoddard solvent (CAS 8052-41-3) | 3 Not classifiable as to carcinogenicity to humans. |
| Toluene (CAS 108-88-3) | 3 Not classifiable as to carcinogenicity to humans. |

**NTP Report on Carcinogens**

| | |
|---|---|
| Naphthalene (CAS 91-20-3) | Reasonably Anticipated to be a Human Carcinogen. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**Reproductive toxicity** Not expected to be a reproductive hazard.

**Specific target organ toxicity - single exposure** May cause respiratory irritation. May cause drowsiness and dizziness.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**Chronic effects** Suspected to increase risk of cancer.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life.

| Constituents | | Species | Test Results |
|---|---|---|---|
| Ethylbenzene (CAS 100-41-4) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.81 - 2.38 mg/l, 48 hours |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 4.2 mg/l, 96 hours |
| *Chronic* | | | |
| Crustacea | EC50 | Ceriodaphnia dubia | 3.6 mg/l, 7 days |

| Constituents | | Species | Test Results |
|---|---|---|---|
| Naphthalene (CAS 91-20-3) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 1.09 - 3.4 mg/l, 48 hours |
| Fish | LC50 | Pink salmon (Oncorhynchus gorbuscha) | 0.95 - 1.62 mg/l, 96 hours |
| 1,2,4-Trimethylbenzene (CAS 95-63-6) | | | |
| **Aquatic** | | | |
| *Acute* | | | |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | 7.72 mg/l, 96 hours |

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

Stoddard solvent (CAS 8052-41-3) 3.16 - 7.15

**Mobility in soil** The product is insoluble in water.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**DOT**

**UN number** UN1268
**UN proper shipping name** Petroleum distillates, n.o.s.
**Transport hazard class(es)**
**Class** 3
**Subsidiary risk** -
**Label(s)** 3
**Packing group** III
**Environmental hazards**
**Marine pollutant** No.
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.
**Special provisions** 144, B1, IB3, T4, TP1, TP29
**Packaging exceptions** 150
**Packaging non bulk** 203
**Packaging bulk** 242

**IATA**

**UN number** UN1268
**UN proper shipping name** Petroleum distillates, n.o.s.
**Transport hazard class(es)**
**Class** 3
**Subsidiary risk** -
**Label(s)** 3
**Packing group** III
**Environmental hazards** No.
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

| | |
|---|---|
| **UN number** | UN1268 |
| **UN proper shipping name** | PETROLEUM DISTILLATES, N.O.S. |
| **Transport hazard class(es)** | |
| **Class** | 3 |
| **Subsidiary risk** | - |
| **Packing group** | III |
| **Environmental hazards** | |
| **Marine pollutant** | No. |
| **EmS** | F-E, S-E |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**General information** Solvent material is subject to DOT Exception 49 CFR 173.150(f)(2) for domestic shipment only and in non-bulk packaging less than 119 gallons, unless material becomes a hazardous waste.

## 15. Regulatory information

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

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

| | |
|---|---|
| Nonane (CAS 111-84-2) | 1.0 % One-Time Export Notification only. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Ethylbenzene (CAS 100-41-4) | LISTED |
| Naphthalene (CAS 91-20-3) | LISTED |
| Nonane (CAS 111-84-2) | LISTED |
| Toluene (CAS 108-88-3) | LISTED |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| 1,2,4-Trimethylbenzene | 95-63-6 | 0.8 - 4 |
| Ethylbenzene | 100-41-4 | ≤ 0.4 |
| Naphthalene | 91-20-3 | ≤ 0.4 |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

| | |
|---|---|
| Toluene (CAS 108-88-3) | 6594 |

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Toluene (CAS 108-88-3) 35 %WV

**DEA Exempt Chemical Mixtures Code Number**

Toluene (CAS 108-88-3) 594

**US state regulations**

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

**US. Massachusetts RTK - Substance List**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Toluene (CAS 108-88-3)
Trimethylbenzene (CAS 25551-13-7)

**US. New Jersey Worker and Community Right-to-Know Act**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Toluene (CAS 108-88-3)
Trimethylbenzene (CAS 25551-13-7)

**US. Pennsylvania Worker and Community Right-to-Know Law**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Nonane (CAS 111-84-2)
Stoddard solvent (CAS 8052-41-3)
Toluene (CAS 108-88-3)
Trimethylbenzene (CAS 25551-13-7)

**US. Rhode Island RTK**

1,2,4-Trimethylbenzene (CAS 95-63-6)
Ethylbenzene (CAS 100-41-4)
Naphthalene (CAS 91-20-3)
Toluene (CAS 108-88-3)

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 17-June-2015

| | |
|---|---|
| **Revision date** | 07-December-2016 |
| **Version #** | 02 |
| **HMIS® ratings** | Health: 1*<br>Flammability: 2<br>Physical hazard: 0 |
| **Disclaimer** | Heritage-Crystal Clean, LLC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. |

# Safety Data Sheet

**Product Trade Name: Z GUARD ™ 9902M**

## * * * Section 1 - Chemical Product and Company Identification * * *

**Product Trade Name:** **Z Guard ® 9902M** **REVISION DATE May 17, 2019**

**Manufacturer Information**

**Z TECHNOLOGIES CORP.**
26500 Capitol Avenue
Redford, Michigan 48239
Corporate Emergency Telephone: 1-313-937-0710
DUNS # 006-006-019
Website: www.ztechprotection.com

## Emergency Phone Number: 800-424-9300 Medical Emergency

24 Hour Emergency **SPILL LEAK FIRE**
Contact: PERS 1-800-633 8253 PERS
**Customer # 10971**

**This Safety Data Sheet (SDS) has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (CFR 29 1910.1200).US**

## * * * Section 2 - Hazards Identification * * *

**Emergency Overview:**
WARNING! - Contact with this material can cause severe irritation to the skin, eyes and mucous membranes.

**Eye Contact:**
This product is irritating to the eyes.

**Skin Contact:**
This product is irritating to the skin. Contact with the skin or mucous membranes may cause irritation.

**Skin Absorption:**
Components of this product may be absorbed through the skin.

**Ingestion:**
This product will cause irritation to the throat, esophagus, and gastrointestinal tract if it is swallowed. Ingestion may cause diarrhea, nausea and vomiting.

**Inhalation:**
Inhalation of mists of this product may cause irritation to the nasal passages and respiratory tract. Inhalation may cause headaches, nausea and dizziness after prolonged exposure

**Medical Conditions Aggravated by Exposure:**
Pre-existing skin, and respiratory disorders may be aggravated by exposure.

**Hazards other:** **Airless Spray Injection Harard! See Equipment Warnings.**
**Empty container may explode upon welding!**

**Product Trade Name: Z GUARD ™ 9902M**

Hazardous Material Information System (U.S.A.)


The PPE (Personal Protection Equipment) designation in the HMIS is provided for use by employees at supplier sites only. Other users of this product are encouraged to evaluate the hazards of the product and assign PPE that is applicable to their specific situations.

**Caution: 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 HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program.**
**HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

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

## * * * Section 3 - Composition / Information on Ingredients * * *

| CAS # | Component | Percent |
|---|---|---|
| | No hazardous Ingredients above mandated threshold for reporting | |

**Additional Information:**
This product is not considered hazardous as defined by 29 CFR 1910.1200 (Hazard Communication).

## * * * Section 4 - First Aid Measures * * *

**Eye Contact:**

If this chemical contacts the eyes, immediately wash the eyes with large amounts of water, occasionally lifting the lower and upper lids. Get medical attention immediately. Do not wear contact lenses when working with this chemical.

**Skin Contact:**

If this chemical contacts the skin, flush the contaminated skin with water promptly. If this chemical penetrates the clothing, immediately remove the clothing and flush the skin with water promptly. If irritation persists or develops after washing, get medical attention.

**SKIN INJECTION HAZARD**

**Spray from an airless spray tip, airless hose leaks or ruptured airless components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Fluid injected into the skin might look like just a cut, but it is a serious injury. Get immediate surgical attention.**

**Ingestion:**

If this chemical has been swallowed, get medical attention immediately. Give victim several glasses of water to drink. Vomiting may occur spontaneously; do not induce vomiting. Do not give anything by mouth to an unconscious person.

**Inhalation:**

If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. Other measures are usually unnecessary. If breathing difficulty persists or develops, get prompt medical attention.

**Product Trade Name: Z GUARD ™ 9902M**

**First Aid: Notes to Physician**

No additional information is available.

## * * * Section 5 - Fire Fighting Measures * * *

| | | | |
|---|---|---|---|
| **Flash Point:** | 240 ºF | **Upper Flammable Limit (UFL):** | Not applicable |
| **Flammability Classification:** | Nonflammable | **Lower Flammable Limit (LFL):** | Not applicable |

**Fire & Explosion Hazards:**

None expected.

**Extinguishing Media:**

Use dry chemical, foam, carbon dioxide, and/or water fog.

**Fire-Fighting Instructions:**

Firefighters: Wear full protective clothing including self-contained breathing apparatus. Properly decontaminate all equipment after use.

## * * * Section 6 - Accidental Release Measures * * *

**Containment and Clean up procedures must be conducted in accordance with all local, state, and federal regulations.**

**Containment Procedures:**

Stop the flow of material, if this can be done without risk. Wear appropriate protective equipment and clothing during clean up.

**Clean-Up Procedures:**

Absorb spill with inert material and transfer material into appropriate container(s) for disposal. Dispose of collected material according to local, state, and federal regulations

## * * * Section 7 - Handling and Storage * * *

**Handling Procedures:**

Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Use with adequate ventilation. This product is for industrial use only. Do not take internally.

**Storage Procedures:**

**Freezing ruins this product.** Keep container tightly closed when not in use. Store in a cool, well-ventilated area away from incompatible materials.

## * * * Section 8 - Exposure Controls / Personal Protection * * *

**Exposure Guidelines:**

**A: General Product Information**

Follow all applicable exposure limits. Keep formation of airborne mists to a minimum.

**B: Component Exposure Limits**

**Engineering Controls:**

Set up ventilation to effectively remove and prevent buildup of any vapor or mist generated from the handling of this product.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eyes/Face Protective Equipment:**

Wear appropriate eye protection to prevent eye contact.

**Skin Protection:**

Wear appropriate personal protective clothing to prevent skin contact. The worker should immediately wash the skin when it becomes contaminated.

**Respiratory Protection:**

If ventilation is not sufficient to effectively prevent buildup of mists or vapors, provide appropriate NIOSH/MSHA respiratory protection.

**Personal Protective Equipment:**

Provide eyewash fountains in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection.
Provide facilities for quickly drenching the body within the immediate work area for emergency use where there is a possibility of exposure. Depending on the specific circumstances, a deluge shower, a sink or hose could be considered adequate.

## * * * Section 9 - Physical & Chemical Properties * * *

| | | | |
|---|---|---|---|
| **Physical State:** | Liquid | **Appearance:** | Black |
| **Odor:** | Mild Ammonia | **Vapor Pressure:** | 0.29 mmHg |
| **Vapor Density:** | > 1.0 | **Boiling Point:** | >212 °F (100 °C) |
| **Specific Gravity:** | 1.24 | **Freezing Point:** | ND (close to 0C) |
| **Viscosity:** | ND | **pH:** | 8.5 |
| **Solubility in Water:** | Dispersible | **VOC:** | 0.0 lb/gal |
| **Percent Volatile:** | 45 b.w. | **Evaporation Rate:** | Slower than Butyl Acetate |
| | | **Percent Solids:** | 55 nvm |

## * * * Section 10 - Chemical Stability & Reactivity Information * * *

**Chemical Stability:**

Stable under normal conditions.

**Conditions to Avoid:**

Keep away from excessive heat and incompatible materials. **FREEZING RUINS THIS PRODUCT!**

**Incompatibility:**

Do not expose this product to strong oxidizers or strong acids.

**Decomposition Products:**

Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons, hazardous organic compounds, and toxic vapors.

**Hazardous Polymerization:**

Will not occur.

## * * * Section 11 - Toxicological Information * * *

**Acute Toxicity:**

**A: General Product Information**

No information is available for the product.

**B: Component Analysis - LD50/LC50**

**Carcinogenicity:**

**A: General Product Information**

No information is available for the product.

**B: Component Carcinogenicity**

None of this product's components are on IARC or NTP lists.

**Chronic Toxicity**

No information is available for the product.

## * * * Section 12 - Ecological Information * * *

**Ecotoxicity:**

**A: General Product Information**

No data is available for this product.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity**

**Environmental Fate:**

No data is available for this product.

## * * * Section 13 - Disposal Considerations * * *

Wastes must be tested using methods described in 40 CFR Part 261. It is the generator's responsibly to determine if the waste meets applicable definitions of hazardous wastes. State and local regulations may differ from Federal disposal regulations. Dispose of waste material according to Local, State, Federal and Provincial Environmental Regulations.

## * * * Section 14 - Transportation Information * * *

**US DOT Information**

| | |
|---|---|
| Proper Shipping Name | Not DOT Regulated |
| Hazard Class | |
| UN / NA Number | |
| Packing Group | |
| Product RQ (lb) | |

## * * * Section 15 - Regulatory Information * * *

**US Federal Regulations**

**A: General Product Information**

No additional information is available.

**B: Component Analysis**

This material contains one or more of the following chemicals, requiring identification under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**SARA 311/312**: **Acute**: NO **Chronic**: NO **Fire**: No **Pressure**: No **Reactive**: No

**State Regulations**

**A: General Product Information**

No information is available.

**B: Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

**Other Regulations**

**A: General Product Information**

All components are on the U.S. EPA TSCA Inventory List.

**B: Component Analysis – Inventory**

All components are on the U.S. EPA TSCA Inventory List and Domestic Substance List-Canada.

**C: Component Analysis - WHMIS IDL**

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

## * * * Section 16 – Other Information * * *

# Safety Data Sheet

**Product Trade Name: Z GUARD ™ 9902M**

**NFPA Ratings:** **Health**: 1 **Fire:** 0 **Reactivity**: 0 **Other:**
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**HMIS Ratings:** **Health**: 1 **Fire**: 0 **Reactivity**: 0 **Personal Protection:**
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

**Key/Legend:**

| | | | |
|---|---|---|---|
| ACGIH = | American Conference of Governmental Industrial Hygienists | NFPA = | National Fire Protection Association |
| CERCLA = | Comprehensive Environmental Response, Compensation and Liability Act | NIOSH = | National Institute for Occupational Safety and Health |
| EPA = | Environmental Protection Agency | NTP = | National Toxicology Program |
| HMIS = | Hazardous Material Identification System | OSHA = | Occupational Safety and Health Administration |
| IARC = | International Agency for Research on Cancer | SARA = | Superfund Amendments and Reauthorization Act |
| MSHA = | Mine Safety and Health Administration | TSCA = | Toxic Substance Control Act |



**Contact:** Regulatory Affairs
**Contact Phone:** 313 937 0710

This is the end of MSDS for Z Guard ™ 9902 M

| Acetone | | | | | January | | February | | March | | April | | May | | June | | July | | August | | September | | October | | November | | December | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Product Number | Product Name | Lbs. /Gallon | % by wt Acetone | Lbs./Gal Acetone | Total Gallon | Total lbs. Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone | Total Gallon | Total lbs Acetone |
| G2A9640727 | Squid Ink Gray | 8.56 | 15% | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 316 | 406 | 490 | 629 | 844 | 1084 | 918 | 1179 | | 0 | | 0 | | 0 | | 0 | | 0 | 2568 | 3297 |
| E2A960 | DTM Epoxy Sealer (Part A) | 13.25 | 0.90% | 0.12 | 0 | 0 | 0 | 0 | 0 | 0 | 158 | 19 | 245 | 29 | 422 | 50 | 459 | 55 | | 0 | | 0 | | 0 | | 0 | | 0 | 1284 | 153 |
| R7K5200 | Purge Solvent | 6.66 | 80.40% | 5.35 | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 573 | 167 | 894 | 287 | 1537 | 312 | 1671 | | 0 | | 0 | | 0 | | 0 | | 0 | 873 | 4675 |

| T-Butyl Acetate | | | | | January | | February | | March | | April | | May | | June | | July | | August | | September | | October | | November | | December | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Product Number | Product Name | Lbs. /Gallon | % by wt TBA | Lbs./Gal TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total Lbs. TBA | Total Gallon | Total lbs TBA |
| E2A960 | DTM Epoxy Sealer (Part A) | 13.25 | 3.60% | 0.48 | 0 | 0 | 0 | 0 | 0 | 0 | 158 | 75 | 245 | 117 | 422 | 201 | 459 | 219 | | 0 | | 0 | | 0 | | 0 | | 0 | 1284 | 612 |

| Product Number | Product Name | Product Type | Specific Gravity | Density (lbs/gal) | *Enter either, however, if you have both values, please enter both.* | | Hexamethylene-1,6-diisocyanate | | | Ethyl benzene | | | Methyl ethyl ketone (2-Butanone) | | | Methyl isobutyl ketone (Hexone) | | | Glycol ethers2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Lbs VOC/Gal Minus Water/Exempt Solvents | Lbs VOC/Gal With Water/Exempt Solvents | % by weight | Density (lb/gal) | HAP lbs/gal | % by weight | Density (lb/gal) | HAP lbs/gal | % by weight | Density (lb/gal) | HAP lbs/gal | % by weight | Density (lb/gal) | HAP lbs/gal | % by weight | Density (lb/gal) | HAP lbs/gal |
| G2A964072 | Squid Ink Gray | Paint | 1.03 | 8.5902 | 3.10 | 2.51 | | 8.5902 | **0** | | 8.5902 | **0** | | 8.5902 | **0** | | 8.5902 | **0** | | 8.5902 | **0** |
| GH1093 | Genesis M 3.5 Low VOC Hardener | Thinner | 1.06 | 8.8404 | 2.91 | 2.91 | | 8.8404 | **0** | | 8.8404 | **0** | | 8.8404 | **0** | | 8.8404 | **0** | 6.00 | 8.8404 | **0.530424** |
| E2A960 | DTM Epoxy Sealer (Part A) | Primer | 1.59 | 13.2606 | 2.14 | 1.95 | | 13.2606 | **0** | 0.10 | 13.2606 | **0.0132606** | 2.00 | 13.2606 | **0.265212** | 2.00 | 13.2606 | **0.265212** | | 13.2606 | **0** |
| V6V965 | 3.5 VOC Epoxy Hardener | Thinner | 0.91 | 7.5894 | 3.15 | 3.15 | | 7.5894 | **0** | | 7.5894 | **0** | | 7.5894 | **0** | 31.00 | 7.5894 | **2.352714** | | 7.5894 | **0** |
| R7K5200 | Purge Solvent | Thinner | 0.80 | 6.672 | 6.98 | 1.30 | | 6.672 | **0** | | 6.672 | **0** | | 6.672 | **0** | | 6.672 | **0** | | 6.672 | **0** |
| GA1097 | Genesis Standard Accelerator | Thinner | 0.98 | 8.1732 | 8.03 | 8.03 | | 8.1732 | **0** | | 8.1732 | **0** | | 8.1732 | **0** | | 8.1732 | **0** | | 8.1732 | **0** |

## Coating Line - 12 Month Rolling Totals

Coating Line

| TOTAL VOCs Rolling (Coating Line) | | | TOTAL HAPs Rolling (Coating Line) | | | Hexamethylene-1,6-diisocyanate | | | Ethyl benzene | | | Methyl ethyl ketone (2-Butanone) | | | Methyl isobutyl ketone (Hexone) | | | Glycol ethers2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling | Date | Monthly Total (Tons) | Total Tons/Year on 12 Month Rolling |
| 1/31/06 | | | 1/31/06 | | | 1/31/06 | | | 1/31/06 | | | 1/31/06 | | | 1/31/06 | | | 1/31/06 | | |
| 2/28/06 | | | 2/28/06 | | | 2/28/06 | | | 2/28/06 | | | 2/28/06 | | | 2/28/06 | | | 2/28/06 | | |
| 3/31/06 | | | 3/31/06 | | | 3/31/06 | | | 3/31/06 | | | 3/31/06 | | | 3/31/06 | | | 3/31/06 | | |
| 4/30/06 | | | 4/30/06 | | | 4/30/06 | | | 4/30/06 | | | 4/30/06 | | | 4/30/06 | | | 4/30/06 | | |
| 5/31/06 | | | 5/31/06 | | | 5/31/06 | | | 5/31/06 | | | 5/31/06 | | | 5/31/06 | | | 5/31/06 | | |
| 6/30/06 | | | 6/30/06 | | | 6/30/06 | | | 6/30/06 | | | 6/30/06 | | | 6/30/06 | | | 6/30/06 | | |
| 7/31/06 | | | 7/31/06 | | | 7/31/06 | | | 7/31/06 | | | 7/31/06 | | | 7/31/06 | | | 7/31/06 | | |
| 8/31/06 | | | 8/31/06 | | | 8/31/06 | | | 8/31/06 | | | 8/31/06 | | | 8/31/06 | | | 8/31/06 | | |
| 9/30/06 | | | 9/30/06 | | | 9/30/06 | | | 9/30/06 | | | 9/30/06 | | | 9/30/06 | | | 9/30/06 | | |
| 10/31/06 | | | 10/31/06 | | | 10/31/06 | | | 10/31/06 | | | 10/31/06 | | | 10/31/06 | | | 10/31/06 | | |
| 11/30/06 | | | 11/30/06 | | | 11/30/06 | | | 11/30/06 | | | 11/30/06 | | | 11/30/06 | | | 11/30/06 | | |
| 12/31/06 | | | 12/31/06 | | | 12/31/06 | | | 12/31/06 | | | 12/31/06 | | | 12/31/06 | | | 12/31/06 | | |
| 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 | 1/31/07 | 0.00 | 0.00 |
| 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 | 2/28/07 | 0.00 | 0.00 |
| 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 | 3/31/07 | 0.00 | 0.00 |
| 4/30/07 | 0.00 | 0.00 | 4/30/07 | 0.12 | 0.12 | 4/30/07 | 0.12 | 0.12 | 4/30/07 | 0.00 | 0.00 | 4/30/07 | 0.00 | 0.00 | 4/30/07 | 0.02 | 0.02 | 4/30/07 | 0.07 | 0.07 |
| 5/31/07 | 1.34 | 1.34 | 5/31/07 | 0.18 | 0.30 | 5/31/07 | 0.00 | 0.12 | 5/31/07 | 0.00 | 0.00 | 5/31/07 | 0.03 | 0.03 | 5/31/07 | 0.10 | 0.13 | 5/31/07 | 0.04 | 0.11 |
| 6/30/07 | 2.31 | 3.65 | 6/30/07 | 0.31 | 0.61 | 6/30/07 | 0.31 | 0.43 | 6/30/07 | 0.00 | 0.00 | 6/30/07 | 0.00 | 0.04 | 6/30/07 | 0.06 | 0.18 | 6/30/07 | 0.18 | 0.29 |
| 7/31/07 | 2.51 | 6.15 | 7/31/07 | 0.34 | 0.96 | 7/31/07 | 0.00 | 0.43 | 7/31/07 | 0.00 | 0.00 | 7/31/07 | 0.06 | 0.10 | 7/31/07 | 0.20 | 0.38 | 7/31/07 | 0.08 | 0.37 |
| 8/31/07 | 0.00 | 6.15 | 8/31/07 | 0.00 | 0.96 | 8/31/07 | 0.00 | 0.43 | 8/31/07 | 0.00 | 0.00 | 8/31/07 | 0.00 | 0.10 | 8/31/07 | 0.00 | 0.38 | 8/31/07 | 0.00 | 0.37 |
| 9/30/07 | 0.00 | 6.15 | 9/30/07 | 0.00 | 0.96 | 9/30/07 | 0.00 | 0.43 | 9/30/07 | 0.00 | 0.00 | 9/30/07 | 0.00 | 0.10 | 9/30/07 | 0.00 | 0.38 | 9/30/07 | 0.00 | 0.37 |
| 10/31/07 | 0.00 | 6.15 | 10/31/07 | 0.00 | 0.96 | 10/31/07 | 0.00 | 0.43 | 10/31/07 | 0.00 | 0.00 | 10/31/07 | 0.00 | 0.10 | 10/31/07 | 0.00 | 0.38 | 10/31/07 | 0.00 | 0.37 |
| 11/30/07 | 0.00 | 6.15 | 11/30/07 | 0.00 | 0.96 | 11/30/07 | 0.00 | 0.43 | 11/30/07 | 0.00 | 0.00 | 11/30/07 | 0.00 | 0.10 | 11/30/07 | 0.00 | 0.38 | 11/30/07 | 0.00 | 0.37 |
| 12/31/07 | 0.00 | 6.15 | 12/31/07 | 0.00 | 0.96 | 12/31/07 | 0.00 | 0.43 | 12/31/07 | 0.00 | 0.00 | 12/31/07 | 0.00 | 0.10 | 12/31/07 | 0.00 | 0.38 | 12/31/07 | 0.00 | 0.37 |

Main Menu | **Monthly Usage and Emission Rates** - SCROLL DOWN FOR PURGE OR CLEAN-UP SOLVENT EMISSIONS | USER DATA ENTRY REQUIRED

Specify Control Device

| Control Device (Y/N): | No | Capture Efficiency | 0 | Destruction Efficiency | 0 | 1.00 | Individual HAPs Emitted (Tons) |
|---|---|---|---|---|---|---|---|

| Month | Coatings Used (gal) | Coatings Used (lbs) | Pounds Uncontrolled VOCs Emitted | Pounds Controlled VOCs Emitted | Tons Uncontrolled VOCs Emitted | Tons Controlled VOCs Emitted | Tons Uncontrolled HAPs Emitted | Tons Controlled HAPs Emitted | Hexamethylene-1,6-diisocyanate | Ethyl benzene | 0 | 0 | Methyl ethyl ketone (2-Butanone) | 0 | 0 | Methyl isobutyl ketone (Hexone) | 0 | 0 | Glycol ethers2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr | 734 | 6,816 | 0 | | 0.0000 | | 0.1187 | | 0.12 | 0.00 | 0.00 | 0.02 | 0.07 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| May | 1,136 | 10,564 | 2,676 | | 1.3379 | | 0.1819 | | 0.00 | 0.00 | 0.03 | 0.10 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| June | 1,960 | 18,221 | 4,616 | | 2.3079 | | 0.3143 | | 0.31 | 0.00 | 0.00 | 0.06 | 0.18 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| July | 2,132 | 19,811 | 5,015 | | 2.5074 | | 0.3422 | | 0.00 | 0.00 | 0.06 | 0.20 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Aug | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Sept | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Oct | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Nov | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dec | 0 | 0 | 0 | | 0.0000 | | 0.0000 | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Year-to-Date | 5,961 | 55,412 | 12,306 | | 6.1531 | | 0.9571 | | 0.43 | 0.00 | 0.10 | 0.38 | 0.37 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |