

Safety Data Sheet

NEOGARD CHEMICAL RESISTANT URETHANE HS 70817 CLEAR



Conforms to ANSI Z400.1-2010 Standard - HCS 2012

Protective Clothing	General Hazard	DOT

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : NEOGARD CHEMICAL RESISTANT URETHANE HS
CLEAR
Product identity : 5707900050, 70817
Product type : polyurethane paint (base for multi-component product)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Field of application : buildings and metal industry.
Ready-for-use mixture : Mixing ratio:
57070 = 57079 1 Vol. / 95059 1 Vol.
Identified uses : Industrial/Professional use
TSCA : **Unless otherwise stated. All components are listed or exempted.**

1.3 Details of the supplier of the safety data sheet

Company details : NEOGARD, a Division of Hempel (USA), Inc.
2728 Empire Central
Dallas, TX 75235
Phone number: 1-214-353-1600
E-mail: hempel@hempel.com

1.4 Emergency telephone number (with hours of operation)

For Transportation Emergencies : CHEMTREC: **1-800-424-9300** (Toll-free in the U.S., Canada and the U.S. Virgin Islands) **703-527-3887**
(24 hours)
For calls originating elsewhere (Collect calls are accepted). Contract number: CCN10384
To preserve the effectiveness of arrangements for providing accurate and timely emergency response information, the basic identifying information (shipper name or contract number) must be included on shipping papers.
If the purchaser of this product is going to be shipping this product to other locations, the purchaser must arrange for its own Emergency Information Provider to respond to transport incidents. Hempel's 24 hour response contract does not cover non-Hempel shipments.
For all other information : In USA toll free calling available: 1-800- 678-6641 or (936)-523-6000
(8 AM - 5 PM CST) See Section 4 of the safety data sheet (first aid measures).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
GHS Classification : FLAMMABLE LIQUIDS - Category 4
SKIN IRRITATION - Category 2
SKIN SENSITIZATION - Category 1
TOXIC TO REPRODUCTION - Category 2

2.2 Label elements

Hazard pictograms :



SECTION 2: Hazards identification

Signal word :	Warning
Hazard statements :	H227 - Combustible liquid. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H361 - Suspected of damaging fertility or the unborn child.
Precautionary statements :	
Prevention :	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from flames and hot surfaces. No smoking. Avoid breathing vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.
Response :	IF exposed or concerned: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention.
Storage :	Store locked up. Store in a well-ventilated place. Keep cool.
Disposal :	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements :	None known.

2.3 Other hazards

Hazards not otherwise classified : None known.

SECTION 3: Composition/information on ingredients

Product definition :	Mixture
Physical state :	Liquid.

Product/ingredient name	Identifiers	%	GHS Classification
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane copolymer with acidic groups fumaric acid diethyl ester	136210-32-7	≥25 - ≤50	SKIN SENSITIZATION - Category 1
	623-91-6	≥1 - ≤3 ≥1 - ≤3	EYE IRRITATION - Category 2A ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 3
Solvent naphtha (petroleum), light arom.	64742-95-6	≥1 - ≤3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino] cyclohexanemethylamine	54914-37-3	≥1 - ≤3	SKIN CORROSION - Category 1C EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A
2-methoxy-1-methylethyl acetate	108-65-6	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	41556-26-7	≤0.3	SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2
toluene	108-88-3	≤0.3	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4: First aid measures

4.1 Description of first aid measures

General :	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).
Eye contact :	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation :	Remove to fresh air. Keep person warm and at rest. If unconscious, place in recovery position and seek medical advice.
Skin contact :	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	No known significant effects or critical hazards.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes skin irritation. May cause an allergic skin reaction.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: irritation redness
Ingestion :	No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO ₂ , powders, water spray. Not to be used: waterjet.
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5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides nitrogen oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
Solvent naphtha (petroleum), light arom. 2-methoxy-1-methylethyl acetate toluene	ACGIH TLV (United States). TWA Tentative: 25 ppm 8 hours. OARS WEEL (United States, 1/2021). TWA: 50 ppm 8 hours. OSHA PEL Z2 (United States, 2/2013). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. NIOSH REL (United States, 10/2020). TWA: 100 ppm 10 hours.

SECTION 8: Exposure controls/personal protection

<p>TWA: 375 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m³ 15 minutes. ACGIH TLV (United States, 1/2022). Ototoxicant. TWA: 20 ppm 8 hours.</p>

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure controls

Appropriate engineering controls

Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product.

Note: Local exhaust ventilation is designed to capture an emitted contaminant at or near its source, before the contaminant has a chance to disperse into the workplace air. General exhaust ventilation, also called dilution ventilation, is different from local exhaust ventilation because instead of capturing emissions at their source and removing them from the air, general exhaust ventilation allows the contaminant to be emitted into the workplace air and then dilutes the concentration of the contaminant to an acceptable level (e.g., to the PEL or below).

Individual protection measures

General :	Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
Hygiene measures :	Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
Eye/face protection :	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Hand protection :	Wear chemical-resistant gloves in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances. Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice: May be used: butyl rubber Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®, nitrile rubber Short term exposure: neoprene rubber, natural rubber (latex), polyvinyl chloride (PVC)

Body protection :	Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.
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Respiratory protection :	If working areas have insufficient ventilation, wear half or totally covering mask equipped with gas filter of type Organic Vapor, when grinding use particle filter of type P95, P99 or P100. When spraying use a combined filter (organic vapor / HEPA or organic vapor / P100 type). Be sure to use approved/certified respirator or equivalent. Always wear an air-fed respirator when spraying in a continuous and prolonged work situation (e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter).
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Protective clothing (pictograms) :



Note: Application of paint products by spraying requires additional safety precautions: Full body suit, Full face respirator with air supplied.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state :	Liquid.
Color :	Clear.
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	Testing not relevant or not possible due to nature of the product.
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 75°C (167°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Not available.
Upper/lower flammability or explosive limits :	0.6 - 10.7 vol %
Vapor pressure :	0.009 kPa This is based on data for the following ingredient: bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.05 g/cm ³
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Testing not relevant or not possible due to nature of the product.
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible due to nature of the product.
Explosive properties :	Not available.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight (Included exempt solvent(s)):	17.1 % (w/w)
Water % by weight :	Weighted average: 0 %
VOC content (Coatings) :	1.5 lbs/gal (180 g/l)
VOC content (Regulatory) :	1.5 lbs/gal (180.1 g/l)
TOC Content (Volatile) :	Weighted average: 28 g/l
Solvent Gas :	Weighted average: 0.025 m ³ /l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

No specific data.

10.5 Incompatible materials

Reactive or incompatible with the following materials: oxidizing materials.
Slightly reactive or incompatible with the following materials: moisture.

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl) methane	LC50 Inhalation Dusts and mists	Rat	4224 mg/m ³	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
fumaric acid diethyl ester	LD50 Oral	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1780 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapor	Rat	6193 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3160 mg/kg	-
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino] cyclohexanemethylamine	LD50 Oral	Rat	3492 mg/kg	-
	LD50 Dermal	Rat	>5000 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Oral	Rat	4150 mg/kg	-
	LD50 Dermal	Rabbit	>5 g/kg	-
bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	LD50 Oral	Rat	8532 mg/kg	-
	LD50 Dermal	Rat	>2000 mg/kg	-
toluene	LD50 Oral	Rat	>2000 mg/kg	-
	LC50 Inhalation Vapor	Rat	>20 mg/l	4 hours
	LD50 Oral	Rat	636 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	117914 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl) methane	Respiratory - Mild irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
	Respiratory - Mild irritant	Rabbit	-	-
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino] cyclohexanemethylamine	Skin - Moderate irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
2-methoxy-1-methylethyl acetate	Skin - Severe irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
toluene	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams

SECTION 11: Toxicological information

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	skin	Guinea pig	Sensitizing
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine	skin	Guinea pig	Sensitizing
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	skin	Guinea pig	Sensitizing

Carcinogen Classification

Product/ingredient name	IARC	NTP	OSHA
toluene	3	-	-

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
fumaric acid diethyl ester	Category 3		Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3		Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3		Narcotic effects
toluene	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom. toluene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane, 1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine. May produce an allergic reaction.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Harmful to aquatic life with long lasting effects.

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effect on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	EC50 88.6 mg/l	Daphnia	48 hours
Solvent naphtha (petroleum), light arom.	IC50 113 mg/l LC50 66 mg/l NOEC 0.01 mg/l Acute EC50 2.6 mg/l	Algae Fish Daphnia	72 hours 96 hours 21 days
	Acute EC50 3.2 mg/l Acute LC50 9.22 mg/l	Algae - Pseudokirchneriella subcapitata (green algae) Daphnia Fish - Oncorhynchus mykiss (rainbow trout)	96 hours 48 hours 96 hours
2-methoxy-1-methylethyl acetate	Acute LC50 100 - 180 mg/l Acute EC50 1.68 mg/l	Fish Aquatic plants	96 hours 72 hours
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	Acute LC50 0.97 mg/l Fresh water Chronic NOEC <500000 µg/l Fresh water Chronic NOEC 1000 µg/l Fresh water	Fish - Lepomis macrochirus Algae - Pseudokirchneriella subcapitata Daphnia - Daphnia magna	96 hours 96 hours 21 days
toluene			

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	OECD 301 F 301F Ready Biodegradability - Manometric Respirometry Test	13 % - Not readily - 28 days	-	-
Solvent naphtha (petroleum), light arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	78 % - Readily - 28 days	-	-
	-	>70 % - Readily - 28 days	-	-
2-methoxy-1-methylethyl acetate	OECD 301F Ready Biodegradability - Manometric Respirometry Test	>60 % - Readily - 28 days	-	-
	OECD 301F Ready Biodegradability - Manometric Respirometry Test	90 % - Readily - 28 days	-	-
toluene	OECD 301F Ready Biodegradability - Manometric Respirometry Test	83 % - Readily - 28 days	-	-
	-	100 % - Readily - 14 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	-	-	Not readily
fumaric acid diethyl ester	-	-	Readily
Solvent naphtha (petroleum), light arom.	-	-	Readily
2-methoxy-1-methylethyl acetate	-	-	Readily
toluene	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane	5.99	8228	high
Solvent naphtha (petroleum), light arom.	-	10 - 2500	high
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino]cyclohexanemethylamine	5.2	-	high
2-methoxy-1-methylethyl acetate	1.2	-	low
toluene	2.73	90	low

12.4 Mobility in soil

SECTION 12: Ecological information

Soil/water partition coefficient (K_{oc}): No known data available in our database.

Mobility: No known data available in our database.

12.5 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7 and Section 8 for additional handling information and protection of employees.

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Transport may take place according to national regulation or DOT for transport by road and by train, IMDG for transport by sea, IATA for Air shipment. Refer to specific Dangerous Goods Transport requirements under 49CFR, ICAO and IATA.

	14.1 UN no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
DOT Code	Not regulated.					
TDG Code	Not regulated.					
SCT Code	Not regulated.					
IMDG Code	Not regulated.					
IATA Code	Not regulated.					

Code : Classification

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Federal regulations :

All components are active or exempted.

TSCA 4(a) final test rules: octamethylcyclotetrasiloxane (D4)

TSCA 8(a) PAIR: 2-methoxy-1-methylethyl acetate; acetonitrile; octamethylcyclotetrasiloxane (D4); decamethylcyclopentasiloxane (D5); Dodecamethylcyclohexasiloxane (D6)

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are active or exempted.

Clean Water Act (CWA) 307: toluene; acetonitrile

Clean Water Act (CWA) 311: n-butyl acetate; toluene; phosphoric acid; acetic acid ; formaldehyde

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Product/ingredient name	CAS number	Concentration
2-(2-butoxyethoxy)ethyl acetate	124-17-4	11.825
toluene	108-88-3	0.11914
2-(2-butoxyethoxy)ethanol	112-34-5	0.090256
cumene	98-82-8	0.01898
acetonitrile	75-05-8	0.0010524

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 :

Product/ingredient name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
formaldehyde	<0.1	Yes.	500	74	100	14.8

SARA 304 RQ :

302631174.4 lbs / 137394553.2 kg [34567429.6 gal / 130851955.4 L]

SARA 311/312 Classification :

FLAMMABLE LIQUIDS - Category 4
SKIN IRRITATION - Category 2
SKIN SENSITIZATION - Category 1
TOXIC TO REPRODUCTION - Category 2

Product/ingredient name	%	Classification
bis(4-(1,2-bis(ethoxycarbonyl)ethylamino)-3-methylcyclohexyl)methane copolymer with acidic groups fumaric acid diethyl ester	≥25 - ≤50 ≥1 - ≤3 ≥1 - ≤3	SKIN SENSITIZATION - Category 1 EYE IRRITATION - Category 2A ACUTE TOXICITY (oral) - Category 4 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Solvent naphtha (petroleum), light arom.	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 ASPIRATION HAZARD - Category 1
1,3,3-trimethyl-N-(2-methylpropylidene)-5-[(2-methylpropylidene)amino] cyclohexanemethylamine	≥1 - ≤3	SKIN CORROSION - Category 1C EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1A
2-methoxy-1-methylethyl acetate	≥1 - ≤3	FLAMMABLE LIQUIDS - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
bis (1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	≤0.3	SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2
toluene	≤0.3	FLAMMABLE LIQUIDS - Category 2 SKIN IRRITATION - Category 2 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ASPIRATION HAZARD - Category 1

SARA 313 :

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

Form R - Reporting requirements :

Product/ingredient name	CAS number	Concentration
2-(2-butoxyethoxy)ethyl acetate	124-17-4	10 - 20

SECTION 15: Regulatory information

Supplier notification :

Product/ingredient name	CAS number	Concentration
2-(2-butoxyethoxy)ethyl acetate	124-17-4	10 - 20

State regulations :

Connecticut Carcinogen Reporting: None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Substances: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New Jersey Hazardous Substances: The following components are listed: GLYCOL ETHERS; 2-BUTOXY ETHANOL; TOLUENE
New York Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: None of the components are listed.
Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65 PFF :

WARNING: This product can expose you to chemicals including Cumene, Formaldehyde and Ethyl acrylate, which are known to the State of California to cause cancer, and Toluene, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Product/ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
toluene	No.	Yes.		Yes.
cumene	Yes.	No.		
formaldehyde	Yes.	No.	Yes.	
ethyl acrylate	Yes.	No.		

SECTION 16: Other information

Remarks :

Note: In USA, consult Code of Federal Regulations, Title 29, Labor, Parts 1910 and 1915 concerning occupational safety and health standards and regulations, as well as any other applicable Federal, State or local regulations that apply to safe practices in coating operations.
 Warning! If you scrape, sand, or remove old paint, you may release lead dust. LEAD is TOXIC.

Validation :

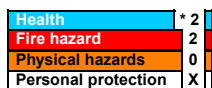
Validated by Company on 30 November 2022

GHS Classification

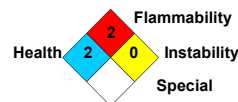
Procedure used to derive the classification.

Classification	Justification
FLAMMABLE LIQUIDS - Category 4 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2	On basis of test data Calculation method Calculation method Calculation method

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



National Fire Protection Association (U.S.A.)



Personal Protective Equipment (PPE) shown in this section is a suggestion. Since conditions vary from one work location to another consult the facility safety & health program. Customer or end user is responsible to evaluate worker exposure conditions at the site of application and determine the appropriate PPE suitable for workers at that particular facility or location.

Abbreviations and acronyms :

SECTION 16: Other information

ANSI = American National Standards Institute

HCS = Hazardous Communication System

TSCA = Toxic Substances Control Act

CFR = Code of Federal Regulations

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

OSHA = United States Occupational Health and Safety Administration

NIOSH = National Institute for Occupational Safety and Health

ACGIH = American Conference of Industrial Hygienists

IARC = International Agency for Research on Cancer.

NTP = National Toxicology Program

ATE = Acute Toxicity Estimate

OECD = Organisation for Economic Co-operation and Development

BCF = Bioconcentration Factor

DOT = United States Department of Transportation

ERG = Emergency Response Guide

TDG = Transport of Dangerous Goods, Canada

SCT = Transportation & Communications Ministry, Mexico


IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

SARA = Superfund Amendments Reauthorization Act

EPCRA = Emergency Planning and Community Right to Know Act

Notice to reader

 Indicates information that has changed from previously issued version.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.