

Safety Data Sheet

NEOGARD FAST-CURE EPOXY CURING AGENT

70715-01



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

Protective Clothing	General Hazard	DOT
Consult your supervisor or S.O.P. for special handling		

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

1.1 Product identifier

Product name : NEOGARD FAST-CURE EPOXY CURING AGENT
Product identity : 9507400000, 70715-01
Product type : Curing agent

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

Field of application : used only as part of two- or multi component products.
Ready-for-use mixture : Used for: 17050 45061
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 : SKIN CORROSION - Category 1A
SERIOUS EYE DAMAGE - Category 1
SKIN SENSITIZATION - Category 1
TOXIC TO REPRODUCTION - Category 2

2.2 Label elements

Hazard pictograms :



Signal word : Danger

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SECTION 2: Hazards identification

Hazard statements :	H314 - Causes severe skin burns and eye damage. 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. 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. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Storage :	Store locked up.
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
4-tert-butylphenol	98-54-4	≥10 - ≤25	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1
m-Xylylene-diamine	1477-55-0	≥10 - ≤23	TOXIC TO REPRODUCTION - Category 2 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1
reactionproduct of MXDA and p-tert-butylphenol with mannich base	133548-08-0	≥10 - <20	SKIN SENSITIZATION - Category 1B SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2
2,4-bis(ethenyl)phenol	61788-44-1	≥10 - ≤25	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1A
benzyl alcohol	100-51-6	≥5 - ≤10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
3-aminomethyl-3,5,5-trimethylcyclohexylamine	2855-13-2	≥5 - ≤10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	25513-64-8	≥5 - ≤8.3	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A
3,6-diazaoctanethylenediamin	112-24-3	≥3 - ≤5	ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
Polymer of: Isophorone diamine and bisphenol A-(epichlorhydrin) epoxy resin		≥3 - ≤5	Not classified.

SECTION 3: Composition/information on ingredients

salicylic acid	69-72-7	<1	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2
3-aminopropyltriethoxysilane	919-30-2	<1	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - 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. Seek immediate medical attention/advice.
Inhalation :	Remove to fresh air and keep at rest in a position comfortable for breathing. Give nothing by mouth. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. If unconscious, place in recovery position and get medical attention immediately.
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. In case of burns flush with water until the pain ceases. While flushing remove clothing from the affected area unless it is burnt into the skin. If hospital treatment is necessary flushing must continue during transfer and until the hospital staff takes over the treatment.
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. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 :	Causes serious eye damage.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes severe burns. 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 watering redness
Inhalation :	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

SECTION 4: First aid measures

Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion :	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

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 toxic 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

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 all direct contact with the spilled material. 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. May be harmful to the environment if released in large quantities.

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). 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
m-Xylylene-diamine	ACGIH TLV (United States, 1/2023). Absorbed through skin. C: 0.018 ppm
benzyl alcohol	NIOSH REL (United States, 10/2020). Absorbed through skin. CEIL: 0.1 mg/m ³
3,6-diazaoctanethylenediamin	OARS WEEL (United States, 4/2022). TWA: 10 ppm 8 hours. OARS WEEL (United States, 4/2022). Absorbed through skin. TWA: 1 ppm 8 hours.

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
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.

SECTION 8: Exposure controls/personal protection

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:

Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)
Recommended: Silver Shield / Barrier / 4H gloves, Viton®
May be used: polyvinyl alcohol (PVA), neoprene rubber, butyl rubber, nitrile rubber

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.
Wear suitable protective clothing.
Chemical-resistant apron.

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).

Protective clothing (pictograms) :

Consult your supervisor or S.O.P. for special handling

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 :	Non-characteristic.
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: 107°C (224.6°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Flammable in the presence of the following materials or conditions: heat.
Upper/lower flammability or explosive limits :	1.1 - 14.3 vol %
Vapor pressure :	Testing not relevant or not possible due to nature of the product.
Vapor density :	Testing not relevant or not possible due to nature of the product.
Relative density :	1.02 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 :	Slightly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

SECTION 9: Physical and chemical properties

Solvent(s) % by weight (Included exempt solvent(s)):	2.4 % (w/w)
Water % by weight :	Weighted average: 0 %
VOC content (Coatings) :	0.2 lbs/gal (24 g/l)
VOC content (Regulatory) :	0.2 lbs/gal (24 g/l)
TOC Content (Volatile) :	Weighted average: 17 g/l
Solvent Gas :	Weighted average: 0.022 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

Extremely reactive or incompatible with the following materials: acids.
Reactive or incompatible with the following materials: oxidizing materials and organic materials.
Slightly reactive or incompatible with the following materials: reducing materials.

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.

Inhalation of a corrosive substance may result in health effects such as stinging, coughing and in extreme cases, dyspnoea or loss of consciousness with a risk of lung damage, possibly lung oedema. Cauterization of skin and mucous membrane. If splashed in the eyes, the liquid may cause irreversible damage. Accidental swallowing may cause stinging and cauterization to mouth, oesophagus and stomach. Symptoms and signs include bloody vomiting, chock and loss of consciousness.

Acute toxicity

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
4-tert-butylphenol	LC50 Inhalation Dusts and mists	Rat	>5600 mg/m ³	4 hours
	LD50 Dermal	Rabbit	2288 mg/kg	-
m-Xylylene-diamine	LD50 Oral	Rat	2951 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.34 mg/l	4 hours
2,4-bis(ethenyl)phenol	LD50 Dermal	Rabbit	>3100 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
benzyl alcohol	LD50 Dermal	Rabbit	>5010 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-
3-aminomethyl-3,5,5-trimethylcyclohexylamine	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m ³	4 hours
	LD50 Oral	Rat	1230 mg/kg	-
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	LD50 Dermal	Rabbit	1840 mg/kg	-
	LD50 Oral	Rat	1030 mg/kg	-
3,6-diazaoctanethylenediamin	LD50 Oral	Rat	910 mg/kg	-
	LD50 Dermal	Rabbit	550 mg/kg	-
salicylic acid	LD50 Oral	Rat	1716 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>0.9 mg/l	1 hours
3-aminopropyltriethoxysilane	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	891 mg/kg	-
	LD50 Dermal	Rabbit	4.29 g/kg	-
	LD50 Oral	Rat	1.57 g/kg	-

Acute toxicity estimates

Route	ATE value
Oral	2769.03 mg/kg
Dermal	15227.24 mg/kg
Inhalation (vapors)	46 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
4-tert-butylphenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
m-Xylylene-diamine	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Respiratory - Severe irritant	Rabbit	-	-
2,4-bis(ethenyl)phenol	Skin - Severe irritant	Rabbit	-	24 hours 750 Micrograms
	Eyes - Irritant	Rabbit	-	-
benzyl alcohol	Skin - Irritant	Rabbit	-	-
	Eyes - Visible necrosis	Rabbit	-	-
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Skin - Mild irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
3,6-diazaoctanethylenediamin	Skin - Severe irritant	Rabbit	-	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams
salicylic acid	Skin - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Eyes - Severe irritant	Rabbit	-	-
3-aminopropyltriethoxysilane	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 5 milligrams

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
3-aminomethyl-3,5,5-trimethylcyclohexylamine	skin	Guinea pig	Sensitizing
3,6-diazaoctanethylenediamin	skin	Guinea pig	Sensitizing

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
reactionproduct of MXDA and p-tert-butylphenol with mannich base	Category 3		Respiratory tract irritation

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

SECTION 11: Toxicological information

Potential chronic health effects

Sensitization : Contains m-Xylylene-diamine, 2,4-bis(ethenyl)phenol, 3-aminomethyl-3,5,5-trimethylcyclohexylamine, 3,6-diazaoctanethylenediamin. 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. Toxic 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.

Product/ingredient name	Result	Species	Exposure
4-tert-butylphenol	Acute EC50 14 mg/l	Algae	72 hours
	Acute EC50 3.4 mg/l	Daphnia	48 hours
	Acute LC50 1.6 mg/l	Fish	48 hours
	Acute LC50 5140 - 5620 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 2.3 mg/l Fresh water	Fish - Cyprinus carpio - Adult	28 days
m-Xylylene-diamine	Acute EC50 20.3 mg/l	Algae	72 hours
	Acute EC50 15.2 mg/l	Daphnia - Daphnia	48 hours
	Acute LC50 87.6 mg/l	Fish - Leuciscus idus	96 hours
	Acute NOEC 4.7 mg/l	Daphnia	21 days
reactionproduct of MXDA and p-tert-butylphenol with mannich base	Acute LC50 4.94 mg/l	Algae	72 hours
	Acute LC50 8.98 mg/l	Daphnia	48 hours
2,4-bis(ethenyl)phenol	Acute LC50 7.9 mg/l	Fish	96 hours
	Acute EC50 3.14 mg/l	Algae	72 hours
	Acute EC50 1 - 10 mg/l	Daphnia	48 hours
benzyl alcohol	Acute EC50 14.8 mg/l	Fish	96 hours
	Acute EC50 230 mg/l	Daphnia	48 hours
	Acute IC50 770 mg/l	Algae	72 hours
3-aminomethyl-3,5,5-trimethylcyclohexylamine	Acute LC50 460 mg/l	Fish	96 hours
	Acute EC50 >50 mg/l	Aquatic plants	72 hours
	Acute EC50 23 mg/l	Daphnia	48 hours
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	Acute LC50 110 mg/l	Fish	96 hours
	Chronic EC50 37 mg/l	Algae	72 hours
	Chronic NOEC 3 mg/l	Daphnia	21 days
	Acute EC50 29.5 mg/l	Algae	72 hours
3,6-diazaoctanethylenediamin	Acute EC50 20 mg/l	Algae	72 hours
	Acute EC50 31.1 mg/l	Daphnia	48 hours
	Acute LC50 330 mg/l	Fish	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
4-tert-butylphenol	OECD 301A Ready Biodegradability - DOC Die-Away Test	98 % - Readily - 28 days	-	-
m-Xylylene-diamine	OECD 301B 301B Ready Biodegradability - CO ₂ Evolution Test	49 % - Inherent - 28 days	-	-
benzyl alcohol	OECD 301A 301A Ready Biodegradability - DOC Die-Away Test	95 - 97 % - Readily - 21 days	-	-
	OECD 301C 301C Ready Biodegradability - Modified MITI Test (I)	92 - 96 % - Readily - 14 days	-	-
3-aminomethyl-	-	8 % - Not readily - 28 days	-	-

SECTION 12: Ecological information

3,5,5-trimethylcyclohexylamine 2,2,4(or 2,4,4)-trimethylhexane- 1,6-diamine salicylic acid	EU EC no. 440/2008, Annex C.4-A -	7 % - Not readily - 28 days 100 % - Readily - 14 days	- -	- -
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Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
4-tert-butylphenol	-	-	Readily
m-Xylylene-diamine	-	-	Inherent
2,4-bis(ethenyl)phenol	-	-	Not readily
benzyl alcohol	-	-	Readily
3-aminomethyl-	-	-	Not readily
3,5,5-trimethylcyclohexylamine	-	-	
2,2,4(or 2,4,4)-trimethylhexane- 1,6-diamine	-	-	Not readily
salicylic acid	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
4-tert-butylphenol	3	44 - 48	low
m-Xylylene-diamine	0.18	2.69	low
benzyl alcohol	0.87	1.37	low
3-aminomethyl-3,5,5-trimethylcyclohexylamine	0.99	-	low
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	-0.3	-	low
3,6-diazaoctanethylenediamin	-1.66 - -1.4	-	low
salicylic acid	2.21 - 2.26	-	low
3-aminopropyltriethoxysilane	1.7	3.4	low

12.4 Mobility in soil

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. 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*	14.5 Additional information
DOT Code	UN3066	PAINT RELATED MATERIAL. (4-tert-butylphenol)	8 -  	III	Yes.	The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes.
TDG Code	UN3066	PAINT RELATED MATERIAL. (4-tert-butylphenol)	8 -  	III	Yes.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
SCT Code	UN3066	PAINT RELATED MATERIAL	8 - 	III	Yes.	-
IMDG Code	UN3066	PAINT RELATED MATERIAL. (4-tert-butylphenol)	8 -  	III	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-A, S-B
IATA Code	UN3066	PAINT RELATED MATERIAL	8 - 	III	Yes.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

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 8(a) PAIR: 4-tert-butylphenol; 2,4-bis(ethenyl)phenol; benzaldehyde

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: phenol

Clean Water Act (CWA) 311: phenol; styrene

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

Product/ingredient name	CAS number	Concentration
phenol	108-95-2	0.0017167
styrene	100-42-5	<0.001

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

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SARA 302/304 :

Product/ingredient name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
phenol	≤0.1	Yes.	500 / 10000	-	1000	-

SARA 304 RQ :

58251063.1 lbs / 26445982.6 kg [6869507.9 gal / 26003916.1 L]

SARA 311/312 Classification :

SKIN CORROSION - Category 1A
 SERIOUS EYE DAMAGE - Category 1
 SKIN SENSITIZATION - Category 1
 TOXIC TO REPRODUCTION - Category 2

Product/ingredient name	%	Classification
4-tert-butylphenol	≥10 - ≤25	SKIN IRRITATION - Category 2 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2
m-Xylylene-diamine	≥10 - ≤23	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1B
reactionproduct of MXDA and p-tert-butylphenol with mannich base	≥10 - <20	SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2,4-bis(ethenyl)phenol	≥10 - ≤25	SKIN IRRITATION - Category 2 SKIN SENSITIZATION - Category 1A
benzyl alcohol	≥5 - ≤10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 EYE IRRITATION - Category 2A
3-aminomethyl-3,5,5-trimethylcyclohexylamine	≥5 - ≤10	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	≥5 - ≤8.3	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A
3,6-diazaoctanethylenediamin	≥3 - ≤5	ACUTE TOXICITY (dermal) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1
salicylic acid	<1	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1 TOXIC TO REPRODUCTION - Category 2
3-aminopropyltriethoxysilane	<1	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1

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: The following components are listed: M-XYLENE-ALPHA,ALPHA'-DIAMINE; BENZYL ALCOHOL; TRIETHYLENETETRAMINE
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: m-XYLENE alpha, alpha'-DIAMINE; ISOPHORONEDIAMINE; TRIETHYLENE TETRAMINE
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: The following components are listed: 1,3-BENZENED, IMETHANAMINE; BENZENEMETHANOL; 1,2-ETHANEDIAMINE, N,N'-BIS(2-AMINOETHYL)-
Rhode Island Hazardous Substances: None of the components are listed.

California Prop. 65 PFF :

WARNING: This product can expose you to Styrene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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SECTION 15: Regulatory information

Product/ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
styrene	Yes.	No.	Yes.	

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 US - HSE Products Coordinator on 23 February 2024

GHS Classification

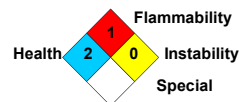
Procedure used to derive the classification.

Classification	Justification
SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2	Calculation method Calculation method Calculation method Calculation method

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

Health	3
Fire hazard	1
Physical hazards	0
Personal protection	X

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 :

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.