

# SAFETY DATA SHEET

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## RENCAST® 140 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/03/2019	400001012651	Date of first issue: 04/03/2019

Print Date 04/29/2019

### SECTION 1. IDENTIFICATION

Product name : RENCAST® 140 US

#### Manufacturer or supplier's details

Company name of supplier : Huntsman Advanced Materials Americas LLC  
Address : P.O. Box 4980  
The Woodlands,  
TX 77387  
United States of America (USA)  
Telephone : Non-Emergency: (800) 257-5547  
E-mail address of person responsible for the SDS : SDS@huntsman.com  
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

#### Recommended use of the chemical and restrictions on use

Recommended use : Resin  
Restrictions on use : For industrial use only.



### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with 29 CFR 1910.1200

Skin corrosion : Category 1B  
Serious eye damage : Category 1  
Skin sensitisation : Category 1  
Reproductive toxicity : Category 2  
Short-term (acute) aquatic hazard : Category 1  
Long-term (chronic) aquatic hazard : Category 1

#### GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.

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H317 May cause an allergic skin reaction.  
H361 Suspected of damaging fertility or the unborn child.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements****Prevention:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	1675-54-3	70 - 90
Phenol, 4-nonyl-, branched	84852-15-3	10 - 20

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

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Both 25068-38-6 and 1675-54-3 can be used to describe the epoxy resin which is produced through the reaction of bisphenol A and epichlorohydrin

**SECTION 4. FIRST AID MEASURES**

- |   |  |
|---|--|
| General advice  | : Move out of dangerous area.<br>Consult a physician.<br>Show this safety data sheet to the doctor in attendance.<br>Treat symptomatically.<br>Get medical attention if symptoms occur.  |
| If inhaled  | : If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.   |
| In case of skin contact                                     | : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes.   |
| In case of eye contact                                      | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.<br>In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.<br>Continue rinsing eyes during transport to hospital.<br>Remove contact lenses.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist. |
| If swallowed  | : Keep respiratory tract clear.<br>Do NOT induce vomiting.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital.   |
| Most important symptoms and effects, both acute and delayed | : None known.  |
| Notes to physician  | : Treat symptomatically.   |

**SECTION 5. FIREFIGHTING MEASURES**

- |                                |   |
|--------------------------------|---|
| Suitable extinguishing media   | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : High volume water jet   |
| Specific hazards during        | : Do not allow run-off from fire fighting to enter drains or water  |

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firefighting	courses.
Hazardous combustion products	: Carbon oxides Halogenated compounds
Specific extinguishing methods	: No data is available on the product itself.
Further information	: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for firefighters	: Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
Advice on safe handling	: Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Conditions for safe storage	: Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions.

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Keep in properly labelled containers.

Materials to avoid	:	For incompatible materials please refer to Section 10 of this SDS.
Recommended storage temperature	:	36 - 104 °F / 2 - 40 °C
Further information on storage stability	:	Stable under normal conditions.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

Respiratory protection	:	General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.
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Hand protection

Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
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Eye protection	:	Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
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Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
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Hygiene measures	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.
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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	:	liquid
Colour	:	Clear
Odour	:	mild



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Odour Threshold	: No data is available on the product itself.
pH	: No data is available on the product itself.
Freezing point	: No data is available on the product itself.
Melting point	: No data is available on the product itself.
Boiling point	: No data is available on the product itself.
Flash point	: > 199 °F / > 93 °C Method: closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: 1.13
Density	: No data is available on the product itself.
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Thermal decomposition	: No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.
Viscosity	: No data is available on the product itself.
Explosive properties	: No data is available on the product itself.
Oxidizing properties	: No data is available on the product itself.

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Particle size : No data is available on the product itself.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: None known.
Incompatible materials	: None known.
Hazardous decomposition products	: carbon dioxide carbon monoxide Halogenated compounds

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : No data is available on the product itself.

**Acute toxicity**Acute oral toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

Acute inhalation toxicity : No data available

**Components:**

2,2'-[[1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

Phenol, 4-nonyl-, branched:

Acute dermal toxicity : LD50 (Rabbit, male): 2,031 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

Acute toxicity (other routes of administration) : No data available

**Skin corrosion/irritation****Components:**

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2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Species: Rabbit

Assessment: Mild skin irritant

Method: OECD Test Guideline 404

Result: Irritating to skin.

Phenol, 4-nonyl-, branched:

Species: Rabbit

Assessment: Causes burns.

Result: Causes burns.

**Serious eye damage/eye irritation****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Species: Rabbit

Result: Irritating to eyes.

Assessment: Mild eye irritant

Method: OECD Test Guideline 405

Phenol, 4-nonyl-, branched:

Result: Risk of serious damage to eyes.

**Respiratory or skin sensitisation****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Exposure routes: Skin

Species: Mouse

Assessment: May cause sensitisation by skin contact.

Method: OECD Test Guideline 429

Result: Causes sensitisation.

Phenol, 4-nonyl-, branched:

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

**Components:**

Phenol, 4-nonyl-, branched:

Assessment: Causes severe skin burns and eye damage.

**Germ cell mutagenicity****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Genotoxicity in vitro : Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: positive

Concentration: 0 - 5000 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: positive



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**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Genotoxicity in vivo

: Cell type: Germ  
Application Route: Oral  
Method: OECD Test Guideline 478  
Result: negative

Cell type: Somatic  
Application Route: Oral  
Dose: 0 - 5000 mg/kg  
Method: OPPTS 870.5395  
Result: negative

**Carcinogenicity****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Species: Rat, male and female

Application Route: Oral

Exposure time: 24 month(s)

Dose: 15 mg/kg

Frequency of Treatment: 7 days/week

Method: OECD Test Guideline 453

Result: negative

Species: Mouse, male

Application Route: Dermal

Exposure time: 24 month(s)

Dose: 0.1 mg/kg

Frequency of Treatment: 3 days/week

Method: OECD Test Guideline 453

Result: negative

Species: Rat, female

Application Route: Dermal

Exposure time: 24 month(s)

Dose: 1 mg/kg

Frequency of Treatment: 5 days/week

Method: OECD Test Guideline 453

Result: negative

Carcinogenicity -  
Assessment : No data available

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Effects on fertility

: Test Type: Two-generation study  
Species: Rat, male and female  
Application Route: Oral  
Dose: >750 milligram per kilogram  
General Toxicity - Parent: No-observed-effect level: 540 mg/kg body weight  
General Toxicity F1: No-observed-effect level: 540 mg/kg body weight  
Symptoms: No adverse effects  
Method: OECD Test Guideline 416  
Result: No effects on fertility and early embryonic development were detected.

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Effects on foetal development

: Species: Rabbit, female  
Application Route: Dermal  
General Toxicity Maternal: No observed adverse effect level: 30 mg/kg body weight  
Method: Other guidelines  
Result: No teratogenic effects

Species: Rabbit, female  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level: 60 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level: 180 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

Phenol, 4-nonyl-, branched:

Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level: 75 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

**Components:**

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Phenol, 4-nonyl-, branched:  
Reproductive toxicity -  
Assessment

: Suspected human reproductive toxicant

### STOT - single exposure

No data available

### STOT - repeated exposure

No data available

### Repeated dose toxicity

#### Components:

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Species: Rat, male and female

NOAEL: 50 mg/kg

Application Route: Ingestion

Exposure time: 14 Weeks

Number of exposures: 7 d

Method: Subchronic toxicity

Species: Rat, male and female

NOEL: 10 mg/kg

Application Route: Skin contact

Exposure time: 13 Weeks

Number of exposures: 5 d

Method: Subchronic toxicity

Species: Mouse, male

NOAEL: 100 mg/kg

Application Route: Skin contact

Exposure time: 13 Weeks

Number of exposures: 3 d

Method: Subchronic toxicity

Phenol, 4-nonyl-, branched:

Species: Rat, male and female

NOAEL: 100 mg/kg

Application Route: Ingestion

Exposure time: 672 h

Number of exposures: 7 d

Method: Subacute toxicity

Species: Rat, male and female

NOAEL: 50 mg/kg

Application Route: Ingestion

Exposure time: 2,160 h

Number of exposures: 7 d

Method: Subchronic toxicity

#### Components:

Phenol, 4-nonyl-, branched:

Repeated dose toxicity - : Causes severe skin burns and eye damage.

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Assessment

### Aspiration toxicity

No data available

### Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

### Toxicology, Metabolism, Distribution

No data available

### Neurological effects

No data available

### Further information

Ingestion: No data available

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1.5 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

Phenol, 4-nonyl-, branched:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 0.128 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Test substance: Fresh water  
Method: ASTM Method, other

LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.209 mg/l  
Exposure time: 96 h

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Test Type: flow-through test  
Test substance: Fresh water  
Method: ASTM Method, other

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.221 mg/l  
Exposure time: 96 h  
Test Type: flow-through test  
Test substance: Fresh water  
Method: ASTM Method, other

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.7 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water

Phenol, 4-nonyl-, branched:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.085 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: ASTM Method, other

EC50 (Daphnia magna (Water flea)): 0.14 mg/l  
Exposure time: 48 h  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.2.

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 9.4 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: EPA-660/3-75-009

Phenol, 4-nonyl-, branched:

Toxicity to algae/aquatic plants : EbC50 (Desmodesmus subspicatus (green algae)): 1.3 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water

ErC50 (Selenastrum capricornutum (green algae)): 0.41 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: Algal Toxicity, Tiers I and II

**Components:**

Phenol, 4-nonyl-, branched:

M-Factor (Acute aquatic toxicity) : 10



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**Components:**

Phenol, 4-nonyl-, branched:

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.006 mg/l  
 Exposure time: 91 d  
 Test Type: flow-through test  
 Test substance: Fresh water

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.3 mg/l  
 Exposure time: 21 d  
 Test Type: semi-static test  
 Test substance: Fresh water  
 Method: OECD Test Guideline 211

**Components:**

Phenol, 4-nonyl-, branched:

M-Factor (Chronic aquatic toxicity) : 10

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Toxicity to microorganisms : IC50 (activated sludge): > 100 mg/l  
 Exposure time: 3 h  
 Test Type: static test  
 Test substance: Fresh water

Phenol, 4-nonyl-, branched:

Toxicity to microorganisms : EC50 (activated sludge): 950 mg/l  
 Exposure time: 3 h  
 Test Type: static test  
 Test substance: Fresh water  
 Method: OECD Test Guideline 209

**Components:**

Phenol, 4-nonyl-, branched:

Toxicity to soil dwelling organisms : EC10: 3.44 mg/kg  
 Exposure time: 504 h  
 EC50 (Other): 906.7 mg/kg  
 Exposure time: 4 Weeks  
 Test substance: Synthetic

Plant toxicity : No data available

Sediment toxicity : No data available

**Components:**

Phenol, 4-nonyl-, branched:

Toxicity to terrestrial organisms : EC10: 63.2 mg/kg  
 Exposure time: 672 h  
 Test substance: Synthetic

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Ecotoxicology Assessment  
Acute aquatic toxicity : No data available

Chronic aquatic toxicity : No data available

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

**Persistence and degradability****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Biodegradability : Inoculum: Sewage (STP effluent)  
Concentration: 20 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 5 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301F

Phenol, 4-nonyl-, branched:  
Biodegradability

: Inoculum: activated sludge  
Concentration: 13 mg/l  
Result: Inherently biodegradable.  
Biodegradation: ca. 48.2 %  
Exposure time: 35 d  
Method: OECD Test Guideline 301B

Inoculum: Sediment  
Concentration: 2  
Result: Inherently biodegradable.  
Biodegradation: 100 %  
Exposure time: 63 - 84 d  
Method: Anaerobic Biodegradability in the Subsurface

Inoculum: Marine water  
Concentration: 11  
Biodegradation: 50 %  
Exposure time: 56 - 112 d  
Method: OECD Test Guideline 309

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon : No data available

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(DOC)

Physico-chemical : No data available  
removability

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Stability in water : Degradation half life(DT50): 4.83 d (77 °F / 25 °C) pH: 4  
Method: OECD Test Guideline 111  
Remarks: Fresh water

Degradation half life(DT50): 7.1 d (77 °F / 25 °C) pH: 9  
Method: OECD Test Guideline 111  
Remarks: Fresh water

Degradation half life(DT50): 3.58 d (77 °F / 25 °C) pH: 7  
Method: OECD Test Guideline 111  
Remarks: Fresh water

Photodegradation : No data available

Impact on Sewage : No data available  
Treatment

**Bioaccumulative potential****Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Bioaccumulation : Bioconcentration factor (BCF): 31  
Remarks: Does not bioaccumulate.

Phenol, 4-nonyl-, branched:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 231  
Remarks: Does not bioaccumulate.

Species: Pimephales promelas (fathead minnow)  
Bioconcentration factor (BCF): 740  
Remarks: Bioaccumulation is unlikely.

**Components:**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Partition coefficient: n- : log Pow: 3.242 (77 °F / 25 °C)  
octanol/water pH: 7.1  
Method: OECD Test Guideline 117

Phenol, 4-nonyl-, branched:

Partition coefficient: n- : log Pow: 5.4 (73 °F / 23 °C)  
octanol/water pH: 5.7  
Method: OECD Test Guideline 117

**Mobility in soil**

Mobility : No data available

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## RENCAS<sup>®</sup> 140 US

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### Components:

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane:

Distribution among  
environmental compartments : Koc: 445

Phenol, 4-nonyl-, branched:

Distribution among  
environmental compartments : Koc: 23000 - 489000

Stability in soil : No data available

### **Other adverse effects**

Environmental fate and  
pathways : No data available

Results of PBT and vPvB  
assessment : No data available

Endocrine disrupting  
potential : No data available

Adsorbed organic bound  
halogens (AOX) : No data available

### **Hazardous to the ozone layer**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).

Additional ecological  
information - Product : An environmental hazard cannot be excluded in the event of  
unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

Global warming potential  
(GWP) : No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water  
courses or the soil.  
Do not contaminate ponds, waterways or ditches with  
chemical or used container.  
Send to a licensed waste management company.  
Dispose of as hazardous waste in compliance with local and  
national regulations.  
Dispose of contents/ container to an approved waste disposal  
plant.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.

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Do not re-use empty containers.

**SECTION 14. TRANSPORT INFORMATION****International Regulations****IATA**

UN/ID No.	: UN 3145
Proper shipping name	: Alkylphenols, liquid, n.o.s. (NONYL PHENOL)
Class	: 8
Packing group	: II
Labels	: Corrosive
Packing instruction (cargo aircraft)	: 855
Packing instruction (passenger aircraft)	: 851

**IMDG**

UN number	: UN 3145
Proper shipping name	: ALKYLPHENOLS, LIQUID, N.O.S. (NONYL PHENOL)
Class	: 8
Packing group	: II
Labels	: 8
EmS Code	: F-A, S-B
Marine pollutant	: yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****DOT Classification**

UN/ID/NA number	: UN 3145
Proper shipping name	: ALKYLPHENOLS, LIQUID, N.O.S. (NONYL PHENOL)
Class	: 8
Packing group	: II
Labels	: CORROSIVE
ERG Code	: 153
Marine pollutant	: yes(NONYL PHENOL)

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.



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**SECTION 15. REGULATORY INFORMATION****EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
benzyl butyl phthalate	85-68-7	100	*
phenol	108-95-2	1000	*
1-chloro-2,3-epoxypropane	106-89-8	100	*
dibutyl phthalate	84-74-2	10	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 311/312 Hazards** : Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitisation  
Reproductive toxicity

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

Phenol, 4-nonyl-, branched 84852-15-3 &gt;= 10 - &lt; 20 %

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

**California Prop. 65**

WARNING: This product can expose you to chemicals including benzyl butyl phthalate, 4,4'-isopropylidenediphenol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**The components of this product are reported in the following inventories:**

CH INV : The formulation contains substances listed on the Swiss Inventory

DSL : This product contains one or several components listed in the Canadian NDSL.

AICS : On the inventory, or in compliance with the inventory

NZIoC : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

KECI : Not in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On the inventory, or in compliance with the inventory

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### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

### TSCA - 5(a) Significant New Use Rule List of Chemicals

This product is subject under TSCA 5(a) to Significant New Use Restrictions (SNUR).  
Phenol, 4-nonyl-, branched 84852-15-3

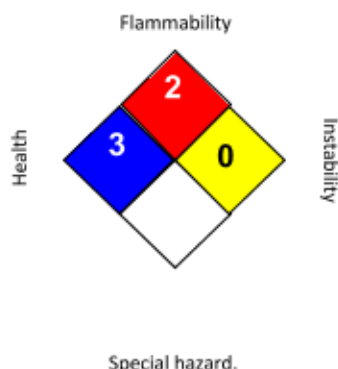
### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)  
Phenol, 4-nonyl-, branched 84852-15-3

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		2
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard

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The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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**SECTION 1. IDENTIFICATION**

Product name : REN® 140 US

**Manufacturer or supplier's details**

Company name of supplier : Huntsman Advanced Materials Americas LLC  
Address : P.O. Box 4980  
The Woodlands,  
TX 77387  
United States of America  
Telephone : Non-Emergency: (800) 257-5547  
E-mail address of person responsible for the SDS : MSDS@huntsman.com  
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

**Recommended use of the chemical and restrictions on use**

Recommended use : Hardener

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Skin corrosion : Category 1C  
Serious eye damage : Category 1  
Acute aquatic toxicity : Category 3  
Chronic aquatic toxicity : Category 3

**GHS label elements**

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT



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induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
Polyoxypropylene diamine	9046-10-0	60 - 100

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.



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- Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : None known.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : No data is available on the product itself.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : No data is available on the product itself.
- Specific extinguishing methods : No data is available on the product itself.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Neutralise with acid.  
Soak up with inert absorbent material (e.g. sand, silica gel,

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acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
To avoid spills during handling keep bottle on a metal tray.  
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
- Hand protection  
Material : butyl-rubber  
Break through time : > 8 h  
  
Solvent-resistant gloves (butyl-rubber)  
Nitrile rubber  
10 - 480 min
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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Hygiene measures : When using do not eat or drink.  
 When using do not smoke.  
 Wash hands before breaks and at the end of workday.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	: liquid
Colour	: clear colourless
Odour	: ammoniacal
Odour Threshold	: No data is available on the product itself.
pH	: 12.4
Boiling point	: 260 °C
Flash point	: 124 °C Method: Pensky-Martens closed cup, closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit	: No data is available on the product itself.
Lower explosion limit	: No data is available on the product itself.
Vapour pressure	: 1.333 hPa (100 °C)
Relative vapour density	: No data is available on the product itself.
Relative density	: 0.948
Density	: No data is available on the product itself.
Solubility(ies)	
Water solubility	: slightly soluble
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Thermal decomposition	: No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.



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Viscosity : No data is available on the product itself.

**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: No data available

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : No data is available on the product itself.

**Acute toxicity**

Acute oral toxicity - Product : Acute toxicity estimate : 3,069 mg/kg  
Method: Calculation method

**Components:**

Polyoxypropylene diamine:

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.74 mg/l  
Exposure time: 8 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity - Product : Acute toxicity estimate : 2,946 mg/kg  
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

**Skin corrosion/irritation****Product:**

Result: Corrosive after 1 to 4 hours of exposure

Remarks: Extremely corrosive and destructive to tissue.

**Serious eye damage/eye irritation****Product:**

Remarks: May cause irreversible eye damage.

**Respiratory or skin sensitisation**

No data available

Assessment: No data available

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**Germ cell mutagenicity****Components:**

Polyoxypropylene diamine:  
Genotoxicity in vitro

: Concentration: 0 - 10000 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

**Components:**

Polyoxypropylene diamine:  
Genotoxicity in vivo

: Application Route: Oral  
Dose: 500 mg/kg  
Method: OECD Test Guideline 474  
Result: negative

**Carcinogenicity**

No data available

Carcinogenicity -  
Assessment

: No data available

**Reproductive toxicity****Components:**

Polyoxypropylene diamine:  
Effects on fertility

: Species: Rat, male and female  
Application Route: Dermal  
Method: OECD Test Guideline 421  
Result: Animal testing did not show any effects on fertility.

Effects on foetal  
development

: No data available

Reproductive toxicity -  
Assessment

: No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Repeated dose toxicity****Components:**

Polyoxypropylene diamine:  
Species: Rat, male and female  
NOAEL: 250 mg/kg/d



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Application Route: Skin contact  
Exposure time: 2,160 h  
Number of exposures: 5 d  
Method: Subchronic toxicity

Species: Rat, male and female  
NOAEL: 239 mg/kg/d  
Application Route: Ingestion  
Exposure time: 744 h  
Method: Subchronic toxicity

Repeated dose toxicity - : No data available  
Assessment

### Aspiration toxicity

No data available

### Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

### Toxicology, Metabolism, Distribution

No data available

### Neurological effects

No data available

### Further information

#### Product:

Remarks: No data available

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

Polyoxypropylene diamine:  
Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): > 15 mg/l

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Exposure time: 96 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

LC50: 772.14 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Marine water  
Method: OECD Test Guideline 203

**Components:**

Polyoxypropylene diamine:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 80 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

EC50 (Acartia tonsa): 418.34 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Marine water

**Components:**

Polyoxypropylene diamine:

Toxicity to algae : ErC50 (Selenastrum capricornutum (green algae)): 15 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : No data available

M-Factor (Chronic aquatic toxicity) : No data available

Toxicity to bacteria : No data available

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial : No data available

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organisms

Ecotoxicology Assessment

Acute aquatic toxicity : No data available

### Components:

Polyoxypropylene diamine:

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to  
the environment : No data available

Further information:

No data available

### **Persistence and degradability**

#### Components:

Polyoxypropylene diamine:

Biodegradability : Inoculum: Mixture  
Result: Not biodegradable  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

Biochemical Oxygen  
Demand (BOD) : No data available

Chemical Oxygen Demand  
(COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon  
(DOC) : No data available

Physico-chemical  
removability : No data available

### Components:

Polyoxypropylene diamine:

Stability in water : Degradation half life(DT50): 12 Months (25 °C) pH: 6.5  
Method: No information available.  
GLP: No information available.  
Remarks: Fresh water

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### **Components:**

Polyoxypropylene diamine:  
Photodegradation : Test Type: Air

Impact on Sewage  
Treatment : No data available

### **Bioaccumulative potential**

Bioaccumulation : No data available

### **Components:**

Polyoxypropylene diamine:  
Partition coefficient: n-  
octanol/water : log Pow: 1.34 (25 °C)

### **Mobility in soil**

Mobility : No data available

Distribution among  
environmental compartments : No data available

Stability in soil : No data available

### **Other adverse effects**

Environmental fate and  
pathways : No data available

Results of PBT and vPvB  
assessment : No data available

Endocrine disrupting  
potential : No data available

Adsorbed organic bound  
halogens (AOX) : No data available

### **Hazardous to the ozone layer**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I  
Substances  
Remarks: This product neither contains, nor was  
manufactured with a Class I or Class II ODS as defined by the  
U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A +  
B).

Additional ecological  
information - Product : An environmental hazard cannot be excluded in the event of  
unprofessional handling or disposal.  
Toxic to aquatic life with long lasting effects.

Global warming potential  
(GWP) : No data available



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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- |                        |  |
|------------------------|--|
| Waste from residues    | : The product should not be allowed to enter drains, water courses or the soil.<br>Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Send to a licensed waste management company. |
| Contaminated packaging | : Empty remaining contents.<br>Dispose of as unused product.<br>Do not re-use empty containers.  |

**SECTION 14. TRANSPORT INFORMATION****International Regulation****IATA**

- |  |  |
|--|--|
| UN/ID No.                                | : UN 2735  |
| Proper shipping name                     | : Amines, liquid, corrosive, n.o.s.<br>(POLYOXYPROPYLENEDIAMINE) |
| Class                                    | : 8  |
| Packing group                            | : III  |
| Labels                                   | : Corrosive  |
| Packing instruction (cargo aircraft)     | : 856  |
| Packing instruction (passenger aircraft) | : 852  |

**IMDG**

- |                      |  |
|----------------------|--|
| UN number            | : UN 2735  |
| Proper shipping name | : AMINES, LIQUID, CORROSIVE, N.O.S.<br>(POLYOXYPROPYLENEDIAMINE) |
| Class                | : 8  |
| Packing group        | : III  |
| Labels               | : 8  |
| EmS Code             | : F-A, S-B   |
| Marine pollutant     | : yes  |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations****DOT Classification**

- |                      |  |
|----------------------|--|
| UN/ID/NA number      | : UN 2735  |
| Proper shipping name | : AMINES, LIQUID, CORROSIVE, N.O.S.<br>(POLYOXYPROPYLENEDIAMINE) |



# SAFETY DATA SHEET

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Class	: 8
Packing group	: III
Labels	: CORROSIVE
ERG Code	: 153
Marine pollutant	: yes(POLYOXYPROPYLENEDIAMINE)

### SECTION 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know Act

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

#### The components of this product are reported in the following inventories:

CH INV	: The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory
TSCA	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory

#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

#### TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

#### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.

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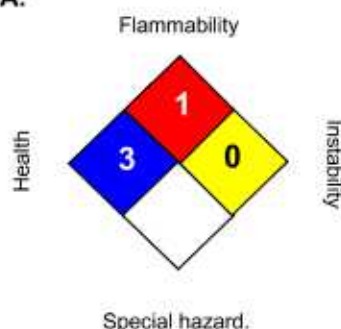
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### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA:



##### HMIS III:

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,

2 = Moderate, 3 = High

4 = Extreme, \* = Chronic

Revision Date : 06/02/2016

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