

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

### SECTION 1. IDENTIFICATION

Product name : RENASTE® 1257-3 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 : Epoxy constituents



### SECTION 2. HAZARDS IDENTIFICATION

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

Flammable liquids : Category 4  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Skin sensitisation : Category 1  
Germ cell mutagenicity : Category 2  
Carcinogenicity : Category 2  
Short-term (acute) aquatic hazard : Category 2  
Long-term (chronic) aquatic hazard : Category 2

#### GHS label elements

Hazard pictograms :



Signal word : Warning

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

**Hazard statements** : H227 Combustible liquid.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.  
H411 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.  
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
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:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.  
P391 Collect spillage.  
**Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
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-	1675-54-3	30 - 50

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

phenyleneoxymethylene]]bisoxirane		
barium sulfate	7727-43-7	10 - 20
limestone	1317-65-3	10 - 20
Glass, oxide, chemicals	65997-17-3	5 - 10
butyl 2,3-epoxypropyl ether	2426-08-6	5 - 10
aluminium hydroxide	21645-51-2	5 - 10
titanium dioxide	13463-67-7	1 - 5

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

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 : No hazards which require special first aid measures.  
Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Treat symptomatically.  
Get medical attention if symptoms occur.
- If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.  
If symptoms persist, call a physician.  
  
If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with soap and plenty of water.  
  
If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
  
Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
  
Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

If symptoms persist, call a physician.  
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.

Carbon dioxide (CO<sub>2</sub>)

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.

Specific extinguishing  
methods : No data is available on the product itself.

Further information : Standard procedure for chemical fires.

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.  
For safety reasons in case of fire, cans should be stored  
separately in closed containments.  
Use a water spray to cool fully closed containers.

Special protective equipment  
for firefighters : In the event of fire, wear self-contained breathing apparatus.

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 : No special environmental precautions required.

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



**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

respective authorities.

Methods and materials for  
 containment and cleaning up

: Wipe up with absorbent material (e.g. cloth, fleece).  
 Keep in suitable, closed containers for disposal.

Contain spillage, and then collect with non-combustible  
 absorbent material, (e.g. sand, earth, diatomaceous earth,  
 vermiculite) and place in container for disposal according to  
 local / national regulations (see section 13).  
 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.

Do not spray on a naked flame or any incandescent material.  
 Keep away from open flames, hot surfaces and sources of  
 ignition.

Advice on safe handling

: For personal protection see section 8.  
 No special handling advice required.

Avoid formation of aerosol.  
 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.  
 Provide sufficient air exchange and/or exhaust in work rooms.  
 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.

No smoking.  
 Keep in a well-ventilated place.  
 Containers which are opened must be carefully resealed and kept  
 upright to prevent leakage.  
 Observe label precautions.  
 Keep in properly labelled containers.

Materials to avoid

: No special restrictions on storage with other products.

For incompatible materials please refer to Section 10 of this  
 SDS.

Further information on  
 storage stability

: No decomposition if stored and applied as directed.

**RENASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

Stable under normal conditions.

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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butyl 2,3-epoxypropyl ether	2426-08-6	TWA	3 ppm	ACGIH
		TWA	50 ppm 270 mg/m3	OSHA Z-1
barium sulfate	7727-43-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m3	ACGIH
limestone	1317-65-3	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
butyl 2,3-epoxypropyl ether	2426-08-6	TWA	3 ppm	ACGIH
		TWA	50 ppm 270 mg/m3	OSHA Z-1
aluminium hydroxide	21645-51-2	TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
		TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA	10 mg/m3 (Titanium dioxide)	ACGIH

**Personal protective equipment**

- Respiratory protection : No personal respiratory protective equipment normally required.
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection
- Remarks : For prolonged or repeated contact use protective gloves.  
The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Safety glasses  
Eye wash bottle with pure water

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

- Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Protective suit  
Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : General industrial hygiene practice.  
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 : paste
- Colour : white
- Odour : slight, ether-like
- 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 : 176 °F / 80 °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 / 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 : 1.62626 hPa (77 °F / 25 °C)
- Relative vapour density : No data is available on the product itself.
- Relative density : 1.5
- Density : No data is available on the product itself.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENASTE® 1257-3 US

Version 1.3	Revision Date: 01/04/2019	SDS Number: 400001012646	Date of last issue: 10/30/2015 Date of first issue: 10/27/2015
----------------	------------------------------	-----------------------------	---

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

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions. No dangerous reaction known under conditions of normal use.
Chemical stability	: No decomposition if stored and applied as directed. Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.  Vapours may form explosive mixture with air.
Conditions to avoid	: No data available  Heat, flames and sparks.
Incompatible materials	: None known.
Hazardous decomposition products	: No hazardous decomposition products are known.

### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	: No data is available on the product itself.
<b>Acute toxicity</b>	
Acute oral toxicity - Product	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

Acute inhalation toxicity - Product : Acute toxicity estimate: 25.51 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

### 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

titanium dioxide:

Acute dermal toxicity : LD50 Dermal (Rabbit): > 10,000 mg/kg

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

### **Skin corrosion/irritation**

#### Components:

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

Species: Rabbit

Assessment: Mild skin irritant

Method: OECD Test Guideline 404

Result: Irritating to skin.

barium sulfate:

Species: human skin

Assessment: No skin irritation

Result: No skin irritation

Glass, oxide, chemicals:

Species: Rabbit

Assessment: No skin irritation

Method: OECD Test Guideline 404

Result: Normally reversible injuries

butyl 2,3-epoxypropyl ether:

Species: Rabbit

Result: No skin irritation

titanium dioxide:

Species: Rabbit

Assessment: No skin irritation

Method: OECD Test Guideline 404

Result: Normally reversible injuries

### **Serious eye damage/eye irritation**

#### Components:



**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

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

Species: Rabbit

Result: Irritating to eyes.

Assessment: Mild eye irritant

Method: OECD Test Guideline 405

barium sulfate:

Species: Rabbit

Result: No eye irritation

Assessment: No eye irritation

Method: OECD Test Guideline 405

limestone:

Species: Rabbit

Result: Mechanical irritation of the eyes is possible.

Assessment: No eye irritation

butyl 2,3-epoxypropyl ether:

Species: Rabbit

Result: Severe eye irritation

Assessment: Severe eye irritation

titanium dioxide:

Species: Rabbit

Result: Normally reversible injuries

Assessment: No eye irritation

Method: OECD Test Guideline 405

**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.

barium sulfate:

Exposure routes: Skin

Species: Mouse

Method: OECD Test Guideline 429

Result: Does not cause skin sensitisation.

limestone:

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

Glass, oxide, chemicals:

Exposure routes: Skin

Species: Other

Result: Does not cause skin sensitisation.

butyl 2,3-epoxypropyl ether:

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

Result: May cause sensitisation by skin contact.

titanium dioxide:

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin

Species: Mouse

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 429

Result: Does not cause skin sensitisation.

Exposure routes: Skin

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

**Components:**

titanium dioxide:

Assessment:

No skin irritation, No eye irritation

Does not cause skin sensitisation., Does not cause respiratory sensitisation.

**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

barium sulfate:

Genotoxicity in vitro

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

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 473

Result: negative

titanium dioxide:

Genotoxicity in vitro

: Test Type: Ames test

Concentration: 100 - 200 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

Test Type: In vitro mammalian cell gene mutation test  
 Concentration: 31 - 500 µg/L  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 476  
 Result: negative

Test Type: Chromosome aberration test in vitro  
 Concentration: 125 - 2500 µg/L  
 Metabolic activation: with and without metabolic activation  
 Method: OECD Test Guideline 473  
 Result: negative

**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

titanium dioxide:

Genotoxicity in vivo : Test Type: Micronucleus test  
 Species: Mouse (males)  
 Application Route: Inhalation  
 Exposure time: 5 consecutive days  
 Dose: 0.8, 7.2, and 28.5 mg/m<sup>3</sup>  
 Method: OECD Test Guideline 474  
 Result: negative

Test Type: Micronucleus test  
 Species: Rat (male and female)  
 Application Route: Oral  
 Exposure time: once  
 Dose: 500, 1000, and 2000 mg/kg bw  
 Method: OECD Test Guideline 474  
 Result: negative

**Components:**

butyl 2,3-epoxypropyl ether:

Germ cell mutagenicity- : In vitro tests showed mutagenic effects  
 Assessment

titanium dioxide:

Germ cell mutagenicity- : Tests on bacterial or mammalian cell cultures did not show  
 Assessment mutagenic effects., Animal testing did not show any mutagenic effects.

Germ cell mutagenicity- : No data available  
 Assessment

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

**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

barium sulfate:

Species: Rat, male and female

Application Route: Oral

Exposure time: 104 weeks

Dose: 60 - 75 mg/kg

Method: OPPTS 870.4200

Result: negative

Species: Mouse, male and female

Application Route: Oral

Dose: 160 - 200 mg/kg

Method: OPPTS 870.4200

Result: negative

titanium dioxide:

Species: Rat, male and female

Application Route: Oral

Exposure time: 103 weeks

Dose: 0, 25000, 50000 ppm

Frequency of Treatment: 7 days/week

NOAEL: &gt; 50.000 ppm

Method: No information available.

Remarks: Titanium Dioxide: based on the results of chronic inhalation studies (with positive results only in a single species - rat), IARC has concluded that: "There is inadequate evidence in humans for the carcinogenicity of titanium dioxide." but that: "There is sufficient evidence in experimental animals for carcinogenicity of titanium dioxide". IARC's overall evaluation was that

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

"titanium dioxide is possibly carcinogenic to humans (Group 2B)."

Huntsman has examined all of the available animal carcinogenicity and mechanistic data together with workplace epidemiology data for titanium dioxide and concludes that the weight of scientific evidence indicates that there is no causative link between titanium dioxide exposure and cancer risk in humans and that workplace exposures in compliance with applicable exposure standards will not result in lung cancer or chronic respiratory diseases in humans.

**Components:**

butyl 2,3-epoxypropyl ether:

Carcinogenicity - : Suspected human carcinogens

Assessment

titanium dioxide:

: Not classifiable as a human carcinogen.

**IARC**

Group 2A: Probably carcinogenic to humans  
Glass, oxide, chemicals  
(glass)

Group 2B: Possibly carcinogenic to humans  
titanium dioxide

**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.

**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



**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

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

titanium dioxide:

Species: Rat, male and female  
Application Route: Oral  
Dose: 100, 300, and 1000 mg/kg bw/  
Duration of Single Treatment: 20 d  
Frequency of Treatment: 7 days/week  
General Toxicity Maternal: No observed adverse effect level:  
1,000 mg/kg body weight  
Developmental Toxicity: No observed adverse effect level:  
1,000 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No adverse effects

**Components:**

titanium dioxide:

Reproductive toxicity -  
Assessment

: No evidence of adverse effects on sexual function and fertility,  
or on development, based on animal experiments.

**STOT - single exposure****Components:**

butyl 2,3-epoxypropyl ether:

Exposure routes: Inhalation

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

**STOT - repeated exposure**

No data available

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

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

Species: Rat, male and female

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

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

barium sulfate:  
Species: Rat  
LOEC:  $\geq 104$  mg/kg, 40 mg/m<sup>3</sup>  
Application Route: Ingestion  
Test atmosphere: dust/mist  
Exposure time: 5 h  
Number of exposures: 5 d  
Method: Subchronic toxicity

Glass, oxide, chemicals:  
Species: Rat, male  
LOEC: 2.4 mg/m<sup>3</sup>  
Test atmosphere: dust/mist  
Exposure time: 2,160 h  
Number of exposures: 6 h  
Method: Directive 67/548/EEC, Annex, B.29

titanium dioxide:  
Species: Rat, male and female  
: 3500 mg/m<sup>3</sup>  
Application Route: Ingestion  
Test atmosphere: dust/mist  
Exposure time: 2 yr  
Number of exposures: 5 d  
Method: Chronic toxicity

Species: Rat, male and female  
: 10 - 50 mg/m<sup>3</sup>  
Application Route: Inhalation  
Exposure time: 2 yr  
Number of exposures: 6 hours/day, 5 days/week  
Method: Chronic toxicity

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

### Components:

titanium dioxide:

Repeated dose toxicity -  
Assessment

: No skin irritation, No eye irritation

No adverse effect has been observed in chronic toxicity tests.

### **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:

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

barium sulfate:

Toxicity to fish : LC50: 174 mg/l

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## RENASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

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

limestone:

Toxicity to fish : LC50: > 56,000 mg/l  
Exposure time: 96 h

Glass, oxide, chemicals:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 1,000 mg/l  
Exposure time: 96 h  
Test Type: Other guidelines  
Test substance: Fresh water  
Method: OECD Test Guideline 203

aluminium hydroxide:

Toxicity to fish : LC50: > 10,000 mg/l  
Exposure time: 96 h

titanium dioxide:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): > 10,000 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Test substance: Marine water  
Method: OECD Test Guideline 203

### 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

barium sulfate:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 14.5 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Glass, oxide, chemicals:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l  
Exposure time: 72 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

aluminium hydroxide:

Toxicity to daphnia and other aquatic invertebrates : EC50: > 10,000 mg/l  
Exposure time: 48 h

### Components:

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

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## RENASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

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

barium sulfate:  
Toxicity to algae/aquatic plants : EC50: > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201  
  
NOEC: > 1.15 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Glass, oxide, chemicals:  
Toxicity to algae/aquatic plants : EgC50 (Selenastrum capricornutum (green algae)): > 1,000 mg/l  
Exposure time: 72 h  
Test Type: semi-static test  
Method: OECD Test Guideline 201

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

Toxicity to fish (Chronic toxicity) : No data available

### 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

barium sulfate:  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 5.8 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

limestone:  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia magna (Water flea)): > 350 mg/l  
Exposure time: 125 d  
Test Type: semi-static test  
Test substance: Fresh water

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



**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

**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

Toxicity to soil dwelling organisms : No data available

**Components:**

titanium dioxide:

Plant toxicity : NOEC: 100,000 mg/kg  
 Exposure time: 480 h

**Components:**

titanium dioxide:

Sediment toxicity : (Gammarus pulex (Amphipod)): > 100000 mg/kg sediment dw  
 Study: Acute  
 Test Type: semi-static test  
 Water: Fresh water  
 Exposure duration: 28 d  
 Method: ASTM Method, other

(Gammarus pulex (Amphipod)): 100000 mg/kg sediment dw  
 Study: Chronic  
 Test Type: semi-static test  
 Water: Fresh water  
 Exposure duration: 28 d  
 Method: ASTM Method, other

(Gammarus pulex (Amphipod)): 14989 mg/kg sediment dw  
 Study: Acute  
 Test Type: semi-static test  
 Water: Marine water  
 Exposure duration: 10 d

**Components:**

titanium dioxide:

Toxicity to terrestrial organisms : NOEC: 10,000 mg/kg  
 Exposure time: 672 h

Ecotoxicology Assessment  
 Acute aquatic toxicity : No data available

**Components:**

butyl 2,3-epoxypropyl ether:

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

Toxicity Data on Soil : No data available

**RENPASTE® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

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

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:**

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 Treatment : No data available

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

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

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

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

titanium dioxide:

Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)  
Bioconcentration factor (BCF): 19 - 352  
Exposure time: 14 d  
Test substance: Fresh water  
Method: semi-static test  
Remarks: Does not bioaccumulate.

### Components:

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

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

limestone:

Partition coefficient: n-octanol/water : log Pow: < 1

### Mobility in soil

Mobility : No data available

### Components:

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

Distribution among environmental compartments : Koc: 445  
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).

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

Additional ecological information - Product : There is no data available for this 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

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.

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.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### IATA

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(BISPHENOL A EPOXY RESIN, BUTYL GLYCIDYL ETHER)

Class : 9

Packing group : III

Labels : Miscellaneous

Packing instruction (cargo aircraft) : 964

Packing instruction (passenger aircraft) : 964

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version 1.3	Revision Date: 01/04/2019	SDS Number: 400001012646	Date of last issue: 10/30/2015 Date of first issue: 10/27/2015
----------------	------------------------------	-----------------------------	---

Environmentally hazardous : yes

### IMDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BISPHENOL A EPOXY RESIN, BUTYL GLYCIDYL ETHER)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
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 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(BISPHENOL A EPOXY RESIN, BUTYL GLYCIDYL ETHER)  
Class : 9  
Packing group : III  
Labels : CLASS 9  
ERG Code : 171  
Marine pollutant : yes(BISPHENOL A EPOXY RESIN, BUTYL GLYCIDYL ETHER)  
Remarks : Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

### 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.

## 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)
1-chloro-2,3-epoxypropane	106-89-8	100	*
methanol	67-56-1	5000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Skin corrosion or irritation  
Serious eye damage or eye irritation



# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## RENPASTE® 1257-3 US

Version 1.3	Revision Date: 01/04/2019	SDS Number: 400001012646	Date of last issue: 10/30/2015 Date of first issue: 10/27/2015
----------------	------------------------------	-----------------------------	---

Respiratory or skin sensitisation  
Germ cell mutagenicity  
Carcinogenicity

**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).

### California Prop. 65

WARNING: This product can expose you to chemicals including methanol, 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	: On the inventory, or in compliance with the 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	: 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
TSCA	: 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.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

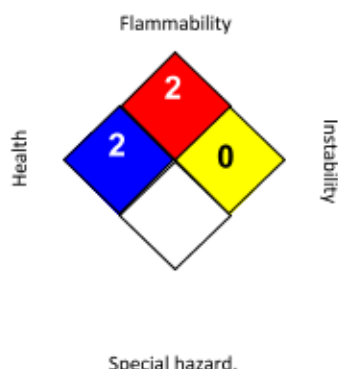
## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
1.3	01/04/2019	400001012646	10/30/2015
			Date of first issue: 10/27/2015

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

HEALTH	*	2
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

Revision Date : 01/04/2019

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1  
Limits for Air Contaminants  
ACGIH / TWA : 8-hour, time-weighted average  
OSHA Z-1 / TWA : 8-hour time weighted average

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.

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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



## RENPASTE® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue: 10/30/2015
1.3	01/04/2019	400001012646	Date of first issue: 10/27/2015

PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

### SECTION 1. IDENTIFICATION

Product name : REN® 1257-3 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 : Hardener

### SECTION 2. HAZARDS IDENTIFICATION

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

Acute toxicity (Inhalation) : Category 4  
Skin corrosion : Category 1B  
Serious eye damage : Category 1  
Skin sensitisation : Category 1  
Reproductive toxicity : Category 1B  
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.  
H317 May cause an allergic skin reaction.

## REN® 1257-3 US

Version 2.0      Revision Date: 04/26/2019      SDS Number: 400001012647      Date of last issue: 06/30/2017  
Date of first issue: 07/01/2016

Print Date 05/02/2019

H332 Harmful if inhaled.  
H360 May damage 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.  
P271 Use only outdoors or in a well-ventilated area.  
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)
limestone	1317-65-3	50 - 70
aluminium hydroxide	21645-51-2	10 - 20
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	10 - 20



# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511 FREEMAN



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0      Revision Date: 04/26/2019      SDS Number: 400001012647      Date of last issue: 06/30/2017  
Date of first issue: 07/01/2016

Print Date 05/02/2019

Phenol, 4-nonyl-, branched	84852-15-3	10 - 20
Diethylenetriamine	111-40-0	5 - 10
4,4'-isopropylidenediphenol	80-05-7	3 - 5
Silicon, amorphous	7631-86-9	1 - 5
Triethylenetetramine	112-24-3	0.25 - 1

The specific chemical identity and/or exact percentage (concentration) of composition may be 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.  
Symptoms of poisoning may appear several hours later.  
Do not leave the victim unattended.
- If inhaled : Call a physician or poison control centre immediately.  
If unconscious, place in recovery position and seek medical advice.
- 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.  
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 : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

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	: Metal oxides Carbon dioxide (CO <sub>2</sub> ) Carbon monoxide Nitrogen oxides (NO <sub>x</sub> )
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. Ensure adequate ventilation. Evacuate personnel to safe areas.
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	: Avoid formation of aerosol. 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. Provide sufficient air exchange and/or exhaust in work rooms. To avoid spills during handling keep bottle on a metal tray. Dispose of rinse water in accordance with local and national regulations.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0      Revision Date: 04/26/2019      SDS Number: 400001012647      Date of last issue: 06/30/2017  
Date of first issue: 07/01/2016

Print Date 05/02/2019

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 : Prevent unauthorized access.  
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.
- Materials to avoid : No materials to be especially mentioned.
- Further information on storage stability : No decomposition if stored and applied as directed.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
limestone	1317-65-3	TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
aluminium hydroxide	21645-51-2	TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
		TWA (Respirable fraction)	1 mg/m3 (Aluminium)	ACGIH
Diethylenetriamine	111-40-0	TWA	1 ppm	ACGIH
Silicon, amorphous	7631-86-9	TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA (Dust)	20 Million particles per cubic foot (Silica)	OSHA Z-3
		TWA (Dust)	80 mg/m3 / %SiO2 (Silica)	OSHA Z-3
		TWA	6 mg/m3 (Silica)	NIOSH REL

**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

**Personal protective equipment**

- Respiratory protection : **W A R N I N G !** This product contains quartz, which has been classified by IARC as carcinogenic for humans (Group 1), and which can cause silicosis and lung cancer following exposure to respirable dust. It is therefore important to take particular care to avoid inhalation exposure when mechanically processing cured material (e.g. grinding, sanding, sawing).
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection
- 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.
- Hygiene measures : Avoid contact with skin, eyes and clothing.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and immediately after handling the product.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : paste
- Colour : blue
- Odour : ammoniacal
- 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 : > 208 °F / > 98 °C  
Method: estimated, closed cup
- Evaporation rate : No data is available on the product itself.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

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	: 1.49296 hPa (126 °F / 52 °C)
Relative vapour density	: No data is available on the product itself.
Relative density	: No data is available on the product itself.
Density	: 1.64 - 1.74 g/cm3
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.
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.
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	: aluminium oxide carbon monoxide



# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

carbon dioxide

Nitrogen oxides

## 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 - Product : Acute toxicity estimate: 2.77 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

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

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

### Skin corrosion/irritation

#### Product:

Remarks: Extremely corrosive and destructive to tissue.

### Serious eye damage/eye irritation

#### Product:

Remarks: May cause irreversible eye damage.

### Respiratory or skin sensitisation

#### Product:

Remarks: Causes sensitisation.

### Components:

Phenol, 4-nonyl-, branched:

Assessment: Causes severe skin burns and eye damage.

### Germ cell mutagenicity

#### Components:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

4,4'-isopropylidenediphenol:  
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
Result: negative

Silicon, amorphous:  
Genotoxicity in vitro : Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 473  
Result: negative

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

Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

Triethylenetetramine:  
Genotoxicity in vitro : Concentration: 0 - 200 µg/L  
Metabolic activation: negative  
Method: OECD Test Guideline 482  
Result: negative

### Components:

Diethylenetriamine:  
Genotoxicity in vivo : Cell type: Somatic  
Application Route: Oral  
Dose: 85 - 850 mg/kg  
Method: OECD Test Guideline 474  
Result: negative

Application Route: Oral  
Result: negative

4,4'-isopropylidenediphenol:  
Genotoxicity in vivo : Method: OECD Test Guideline 474  
Result: negative

Silicon, amorphous:  
Genotoxicity in vivo : Application Route: Inhalation  
Dose: 50 mg/m<sup>3</sup>  
Result: negative

Triethylenetetramine:  
Genotoxicity in vivo : Application Route: Intraperitoneal injection  
Dose: 0 - 600 mg/kg  
Method: OECD Test Guideline 474  
Result: negative

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue: 06/30/2017
2.0	04/26/2019	400001012647	Date of first issue: 07/01/2016

Print Date 05/02/2019

### Carcinogenicity

#### Components:

Diethylenetriamine:  
Species: Mouse, male  
Application Route: Dermal  
Dose: 56.3 mg/kg  
Frequency of Treatment: 3 daily  
Result: negative

4,4'-isopropylidenediphenol:  
Species: Rat, male and female  
Application Route: Oral  
Exposure time: 103 weeks  
Frequency of Treatment: 7 daily  
Result: negative

Silicon, amorphous:  
Species: Rat, male and female  
Application Route: Oral  
Exposure time: 103 weeks  
Dose: 1800 - 3200 mg/kg  
Frequency of Treatment: 7 daily  
Method: OECD Test Guideline 453  
Result: negative

Triethylenetetramine:  
Species: Mouse, male  
Application Route: Dermal  
Dose: 42 mg/kg  
Frequency of Treatment: 3 days/week  
Method: OECD Test Guideline 451  
Result: negative

Species: Mouse, male  
Application Route: Dermal  
Exposure time: 104 weeks  
Dose: 16.8 mg/kg  
Frequency of Treatment: 3 days/week  
Method: OECD Test Guideline 451

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.

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

**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

by NTP.

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

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Effects on fertility : Species: Rat, male and female  
Application Route: Other  
General Toxicity - Parent: No observed adverse effect level:  
1,000 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: Animal testing did not show any effects on fertility.

Diethylenetriamine:

Species: Rat, male and female  
Application Route: Oral  
General Toxicity - Parent: No observed adverse effect level:  
30 mg/kg wet weight  
Method: OECD Test Guideline 421  
Result: positive

4,4'-isopropylidenediphenol:

Species: Rat, male and female  
Application Route: Oral  
Method: OECD Test Guideline 416  
Result: Embryotoxic effects and adverse effects on the  
offspring were detected.

**Components:**

Phenol, 4-nonyl-, branched:

Effects on foetal development : 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

Diethylenetriamine:

Species: Rat  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
100 mg/kg body weight  
Method: OECD Test Guideline 421  
Result: No adverse effects

4,4'-isopropylidenediphenol:

Species: Rat, female  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
< 160 mg/kg body weight  
Method: OECD Test Guideline 416  
Result: No teratogenic effects

Silicon, amorphous:

Species: Mouse

**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Application Route: Oral  
 General Toxicity Maternal: No observed adverse effect level:  
 1,340 mg/kg body weight  
 Method: OECD Test Guideline 414  
 Result: No teratogenic effects

Species: Rabbit  
 Application Route: Oral  
 General Toxicity Maternal: No observed adverse effect level:  
 1,600 mg/kg body weight  
 Method: OECD Test Guideline 414  
 Result: No teratogenic effects

Species: Rat  
 Application Route: Oral  
 General Toxicity Maternal: No observed adverse effect level:  
 1,350 mg/kg body weight  
 Method: OECD Test Guideline 414  
 Result: No teratogenic effects

**Triethylenetetramine:**

Species: Rat  
 Application Route: Oral  
 General Toxicity Maternal: No observed adverse effect level:  
 > 750 mg/kg body weight  
 Method: OECD Test Guideline 414  
 Result: No teratogenic effects

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

**Components:**

Phenol, 4-nonyl-, branched:

Reproductive toxicity - : Suspected human reproductive toxicant  
 Assessment

4,4'-isopropylidenediphenol:

Reproductive toxicity - : Clear evidence of adverse effects on sexual function and  
 Assessment fertility, based on animal experiments.

**STOT - single exposure****Components:**

Diethylenetriamine:

Target Organs: Respiratory Tract

Assessment: May cause respiratory irritation.

4,4'-isopropylidenediphenol:

Assessment: The substance or mixture is classified as specific target organ toxicant, single  
 exposure, category 3 with respiratory tract irritation.



**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue: 06/30/2017
2.0	04/26/2019	400001012647	Date of first issue: 07/01/2016

Print Date 05/02/2019

**STOT - repeated exposure**

No data available

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

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Species: Rat, male and female

NOAEL: 1000 mg/kg

Application Route: Ingestion

Exposure time: 6 Weeks

Number of exposures: 7 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

Diethylenetriamine:

Species: Rat, male and female

NOEC: 70 - 80 mg/m3

Application Route: Ingestion

Test atmosphere: vapour

Exposure time: 360 h

Number of exposures: 7 d

Method: Subchronic toxicity

Species: Rat, male and female

NOAEL: 114 mg/kg/d

Application Route: Skin contact

Exposure time: 9,600 h

Number of exposures: 6 d

Method: Chronic toxicity

4,4'-isopropylidenediphenol:

Species: Dog, male and female

NOEC: 75 mg/kg, 10 mg/m3

Application Route: Ingestion

Test atmosphere: dust/mist

Exposure time: 2,160 h

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

Number of exposures: 7 d  
Method: Subchronic toxicity

Species: Rat, male and female  
LOAEL: 600 mg/kg  
Application Route: Ingestion  
Exposure time: 672 h  
Number of exposures: 7 d  
Method: Subchronic toxicity

Silicon, amorphous:  
Species: Rat, male and female  
NOAEL: 7950 - 8980 mg/kg  
Application Route: Ingestion  
Exposure time: 4,320 h  
Number of exposures: 7 d  
Method: Subchronic toxicity

Species: Rat, male and female  
: 4000 - 4500 mg/m<sup>3</sup>  
Application Route: Ingestion  
Test atmosphere: dust/mist  
Exposure time: 13 Weeks  
Number of exposures: 7 d  
Method: OECD Test Guideline 413

Triethylenetetramine:  
Species: Rat, male and female  
NOAEL: 50 mg/kg/d  
Application Route: Ingestion  
Exposure time: 26 Weeks  
Number of exposures: 7 d  
Method: Subchronic toxicity

### **Components:**

Phenol, 4-nonyl-, branched:  
Repeated dose toxicity - Assessment : Causes severe skin burns and eye damage.

### **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

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

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:

limestone:

Toxicity to fish : LC50: > 56,000 mg/l  
Exposure time: 96 h

aluminium hydroxide:

Toxicity to fish : LC50: > 10,000 mg/l  
Exposure time: 96 h

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Toxicity to fish : LC50: 7.07 mg/l  
Exposure time: 96 h  
Test Type: semi-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  
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

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Test substance: Fresh water  
Method: ASTM Method, other

### Diethylenetriamine:

Toxicity to fish

: LC50: 430 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.1.

### 4,4'-isopropylidenediphenol:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 7.5 mg/l  
Exposure time: 96 h

### Silicon, amorphous:

Toxicity to fish

: LL50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

### Triethylenetetramine:

Toxicity to fish

: LC50 (Pimephales promelas (fathead minnow)): 330 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: Fish Acute Toxicity Test

### Components:

#### aluminium hydroxide:

Toxicity to daphnia and other  
aquatic invertebrates

: EC50: > 10,000 mg/l  
Exposure time: 48 h

#### Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 5.18 mg/l  
Exposure time: 1,152 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

#### 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.

### Diethylenetriamine:

Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 32 mg/l  
Exposure time: 48 h  
Test Type: static test

**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Test substance: Fresh water

4,4'-isopropylidenediphenol:  
Toxicity to daphnia and other  
aquatic invertebrates

: EC50: 3.9 - 10.2 mg/l  
Exposure time: 48 h

(Ceriodaphnia dubia (Water flea)):

Silicon, amorphous:  
Toxicity to daphnia and other  
aquatic invertebrates

: EL50 (Daphnia magna (Water flea)): >= 1,000 mg/l  
Exposure time: 24 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

Triethylenetetramine:  
Toxicity to daphnia and other  
aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 31.1 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.2.

**Components:**

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Toxicity to algae/aquatic  
plants : ErC50 (Selenastrum capricornutum (green algae)): 4.11 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

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

Diethylenetriamine:  
Toxicity to algae/aquatic  
plants

: EbC50 (Selenastrum capricornutum (green algae)): 1,164  
mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

4,4'-isopropylidenediphenol:  
Toxicity to algae/aquatic  
plants

: EC50 (Selenastrum capricornutum (green algae)): 2.5 - 3.1  
mg/l  
Exposure time: 96 h

Silicon, amorphous:



# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Toxicity to algae/aquatic plants : EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

Triethylenetetramine:  
Toxicity to algae/aquatic plants : ErC50 (Selenastrum capricornutum (green algae)): 20 mg/l  
Exposure time: 72 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 201

### Components:

Phenol, 4-nonyl-, branched:  
M-Factor (Acute aquatic toxicity) : 10

### 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

Diethylenetriamine:  
Toxicity to fish (Chronic toxicity) : NOEC: 10 mg/l  
Exposure time: 28 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 210

4,4'-isopropylidenediphenol:  
Toxicity to fish (Chronic toxicity) : NOEC (Pimephales promelas (fathead minnow)): 0.016 mg/l  
Exposure time: 444 d  
Test Type: flow-through test  
Test substance: Fresh water  
Method: Fish Life Cycle Toxicity  
Remarks: Toxic to aquatic organisms.

### Components:

limestone:  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50 (Daphnia magna (Water flea)): > 350 mg/l  
Exposure time: 125 d  
Test Type: semi-static test  
Test substance: Fresh water

Diethylenetriamine:  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 5.6 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.20

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

### Triethylenetetramine:

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10 (Daphnia magna (Water flea)): 1.9 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 202

### Components:

Phenol, 4-nonyl-, branched:  
M-Factor (Chronic aquatic toxicity) : 10  
4,4'-isopropylidenediphenol:  
M-Factor (Chronic aquatic toxicity) : 1

### Components:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:  
Toxicity to microorganisms : EC0: > 100 mg/l  
Method: DIN 38412

### 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

### Triethylenetetramine:

Toxicity to microorganisms : EC50 (activated sludge): 800 mg/l  
Exposure time: 0.5 h  
Test Type: static test  
Test substance: Fresh water

### 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

### Diethylenetriamine:

Toxicity to soil dwelling organisms : EC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg  
Exposure time: 56 d  
Method: OECD Test Guideline 222

Plant toxicity : No data available

Sediment toxicity : No data available

### Components:

Phenol, 4-nonyl-, branched:  
Toxicity to terrestrial : EC10: 63.2 mg/kg

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

organisms

Exposure time: 672 h  
Test substance: Synthetic

### Ecotoxicology Assessment

#### Components:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:  
Acute aquatic toxicity : This product has no known ecotoxicological effects.

Diethylenetriamine:  
Acute aquatic toxicity : This product has no known ecotoxicological effects.

#### Components:

4,4'-isopropylidenediphenol:  
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

Other organisms relevant to  
the environment : No data available

### Persistence and degradability

#### Components:

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Biodegradability : Inoculum: activated sludge  
Concentration: 9 mg/l  
Result: Inherently biodegradable.  
Biodegradation: 100 %  
Exposure time: 74 d  
Method: OECD Test Guideline 301B

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

Diethylenetriamine:  
Biodegradability : Inoculum: activated sludge

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

Result: Readily biodegradable.  
Biodegradation: 87 %  
Exposure time: 21 d  
Method: OECD Test Guideline 301D

4,4'-isopropylidenediphenol:  
Biodegradability

: Result: Not readily biodegradable.  
Biodegradation: 1 - 2 %  
Exposure time: 28 d

Triethylenetetramine:  
Biodegradability

: Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 162 d  
Method: OECD Test Guideline 301D

Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 20 %  
Exposure time: 84 d  
Method: Inherent Biodegradability: Modified SCAS Test

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

Stability in water

: No data available

### Components:

Diethylenetriamine:  
Photodegradation

: Test Type: Air  
Rate constant: 500000  
Degradation (direct photolysis): 50 %

Impact on Sewage  
Treatment

: No data available

**REN® 1257-3 US**

Version	Revision Date:	SDS Number:	Date of last issue:
2.0	04/26/2019	400001012647	06/30/2017
			Date of first issue: 07/01/2016

Print Date 05/02/2019

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

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines:

Bioaccumulation : Bioconcentration factor (BCF): 1.85 - 2.69  
 Test substance: Fresh water

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.

Diethylenetriamine:

Bioaccumulation : Species: Cyprinus carpio (Carp)  
 Bioconcentration factor (BCF): 0.3 - 6.3  
 Exposure time: 42 d  
 Test substance: Fresh water  
 Method: flow-through test  
 Remarks: Bioaccumulation is unlikely.

**Components:**

limestone:

Partition coefficient: n-octanol/water : log Pow: < 1

Phenol, 4-nonyl-, branched:

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

Diethylenetriamine:

Partition coefficient: n-octanol/water : log Pow: -1.58 (68 °F / 20 °C)  
 pH: 7

Triethylenetetramine:

Partition coefficient: n-octanol/water : log Pow: -2.65 (68 °F / 20 °C)  
 Method: OECD Test Guideline 117

**Mobility in soil**

Mobility : No data available

**Components:**

Phenol, 4-nonyl-, branched:

Distribution among environmental compartments : Koc: 23000 - 489000

Diethylenetriamine:

Distribution among environmental compartments : Koc: 19111

Triethylenetetramine:

Distribution among : Koc: 1584.9 - 5012



# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

environmental compartments      Method: OECD Test Guideline 106

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.  
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.

Contaminated packaging      : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue: 06/30/2017
2.0	04/26/2019	400001012647	Date of first issue: 07/01/2016

Print Date 05/02/2019

### IATA

UN/ID No. : UN 1760  
Proper shipping name : Corrosive liquid, n.o.s.  
(NONYL PHENOL, DIETHYLENE TRIAMINE)  
Class : 8  
Packing group : II  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 855  
Packing instruction (passenger aircraft) : 851

### IMDG

UN number : UN 1760  
Proper shipping name : CORROSIVE LIQUID, N.O.S.  
(NONYL PHENOL, DIETHYLENE TRIAMINE)  
Class : 8  
Packing group : II  
Labels : 8  
EmS Code : F-A, S-B  
Marine pollutant : no

### 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 1760  
Proper shipping name : CORROSIVE LIQUIDS, N.O.S.  
(NONYL PHENOL, DIETHYLENE TRIAMINE)  
Class : 8  
Packing group : II  
Labels : CORROSIVE  
ERG Code : 154  
Marine pollutant : no

### 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.

## 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)
phenol	108-95-2	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0	Revision Date: 04/26/2019	SDS Number: 400001012647	Date of last issue: 06/30/2017 Date of first issue: 07/01/2016
----------------	------------------------------	-----------------------------	---

Print Date 05/02/2019

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
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	>= 10 - < 20 %
4,4'-isopropylidenediphenol	80-05-7	>= 1 - < 5 %

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 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	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: Not in compliance with the inventory
TSCA	: 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

This product is subject under TSCA 5(a) to Significant New Use Restrictions (SNUR).

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**  
Enriching lives through innovation

## REN® 1257-3 US

Version 2.0      Revision Date: 04/26/2019      SDS Number: 400001012647      Date of last issue: 06/30/2017  
Date of first issue: 07/01/2016

Print Date 05/02/2019

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)

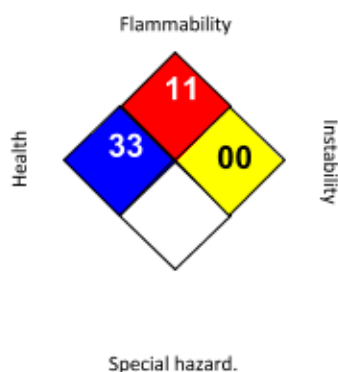
Phenol, 4-nonyl-, branched

84852-15-3

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		1
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

Revision Date : 04/26/2019

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
NIOSH REL : USA. NIOSH Recommended Exposure Limits  
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1  
Limits for Air Contaminants  
OSHA Z-3 : USA. Occupational Exposure Limits (OSHA) - Table Z-3  
Mineral Dusts  
ACGIH / TWA : 8-hour, time-weighted average  
NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour  
workday during a 40-hour workweek  
OSHA Z-1 / TWA : 8-hour time weighted average  
OSHA Z-3 / TWA : 8-hour time weighted average

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.

# SAFETY DATA SHEET

Distributed By  
Freeman Manufacturing & Supply Co.  
www.freemansupply.com 800-321-8511



**HUNTSMAN**

Enriching lives through innovation

## REN® 1257-3 US

Version	Revision Date:	SDS Number:	Date of last issue: 06/30/2017
2.0	04/26/2019	400001012647	Date of first issue: 07/01/2016

Print Date 05/02/2019

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.

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.

The trademarks above are the property of Huntsman Corporation or an affiliate thereof.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE.