

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

SECTION 1. IDENTIFICATION

Product name : HARDENER 9615 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 : MSDS@huntsman.com
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Acute toxicity (Dermal) : Category 4
Skin irritation : Category 2
Serious eye damage : Category 1
Skin sensitisation : Category 1
Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

P272 Contaminated work clothing should 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 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
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.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.

Storage:

Not available

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 : Substance

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
polyamide resin	68154-62-1	90 - 100
trientine	112-24-3	3 - 5

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

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Keep patient warm and at rest.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Seek medical advice.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Consult a physician if necessary.

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.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Do not allow run-off from fire fighting to enter drains or water courses.

No data is available on the product itself.

Hazardous combustion products : No data is available on the product itself.

No hazardous combustion products are known

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 : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.

Environmental precautions : Prevent product from entering drains.
Do not allow contact with soil, surface or ground water.

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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep containers tightly closed in a cool, well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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

Contains no substances with occupational exposure limit values.

Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines
Combined particulates and organic vapour type
- Hand protection
- Material : butyl-rubber
- Break through time : > 8 h
- Material : Nitrile rubber
- Material : Neoprene
- Break through time : 10 - 480 min
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Eye protection : Safety glasses
- Skin and body protection : Protective suit
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Colour : amber

Odour : amine-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 : 135 °C
Method: Pensky-Martens closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Flammability (liquids) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapour pressure : < 10 hPa (20 °C)

Relative vapour density : No data is available on the product itself.

Relative density : 0.95

Density : 0.95 g/cm³ (25 °C)

Solubility(ies)

Water solubility : partly soluble (20 °C)

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.

Decomposition temperature : > 200 °C

Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

Viscosity

Viscosity, dynamic : 30,000 mPa.s (25 °C)

Explosive properties : No data is available on the product itself.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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.
Chemical stability : No decomposition if stored and applied as directed.
Stable under normal conditions.
Possibility of hazardous reactions : Stable under normal conditions.
Conditions to avoid : None known.
Incompatible materials : Strong acids and strong bases
Strong oxidizing agents
Hazardous decomposition products : Carbon oxides
Nitrogen oxides (NOx)
Burning produces noxious and toxic fumes.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity - Product : Assessment: The component/mixture is low toxic after single ingestion.

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : Assessment: The component/mixture is moderately toxic after single contact with skin.

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

Skin corrosion/irritation**Components:**

polyamide resin:
Assessment: Irritating to skin.

trientine:
Species: Rabbit
Assessment: Causes burns.
Method: OECD Test Guideline 404
Result: Causes burns.

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

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

polyamide resin:

Assessment: Irritating to eyes.

trientine:

Species: Rabbit

Result: Corrosive

Assessment: Corrosive

Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Product:**

Result: May cause sensitisation by skin contact.

Assessment: No data available

Germ cell mutagenicity**Components:**

trientine:

Genotoxicity in vitro

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

Components:

trientine:

Genotoxicity in vivo

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

Carcinogenicity**Components:**

trientine:

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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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 identified as a carcinogen or potential carcinogen by OSHA.

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

Effects on fertility : No data available

Components:

trientine:

Effects on foetal development

: 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

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:**

trientine:

Species: Rat, male and female

NOAEL: 50 mg/kg/d

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Application Route: Ingestion
Exposure time: 26 Weeks
Number of exposures: 7 d
Method: Subchronic toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:**

trientine:

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

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

Components:

trientine:

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:

trientine:

Toxicity to algae : 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

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

Toxicity to fish (Chronic toxicity) : No data available

Components:

trientine:

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

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

Components:

trientine:

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

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment Acute aquatic toxicity : No data available

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Components:

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

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability**Components:**

trientine:
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

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Bioaccumulation : No data available

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Components:

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

Mobility in soil

Mobility : No data available

Components:

trientine:
 Distribution among environmental compartments : Koc: 1584.9 - 5012 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 : No data available

Global warming potential (GWP) : No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Can be landfilled or incinerated, when in compliance with local regulations.
 Where possible recycling is preferred to disposal or incineration.
 Send to a licensed waste management company.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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

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

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

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**

Not regulated as dangerous goods

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

SARA 311/312 Hazards : Acute Health Hazard

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

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

CH INV : Low volume exemption, The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

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

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

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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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

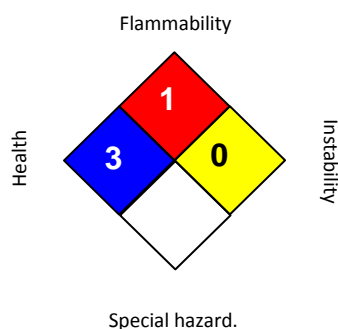
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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.

SECTION 16. OTHER INFORMATION**Further information****NFPA:****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 : 04/19/2017

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.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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.

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

SECTION 1. IDENTIFICATION

Product name : HARDENER 9615 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 : MSDS@huntsman.com
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Hardener

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Acute toxicity (Dermal) : Category 4
Skin irritation : Category 2
Serious eye damage : Category 1
Skin sensitisation : Category 1
Chronic aquatic toxicity : Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

P272 Contaminated work clothing should 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 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
 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.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P362 Take off contaminated clothing and wash before reuse.

Storage:

Not available

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 : Substance

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
polyamide resin	68154-62-1	90 - 100
trientine	112-24-3	3 - 5

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

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
 Keep patient warm and at rest.
 If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
 Wash off with soap and plenty of water.
 If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water.
 Remove contact lenses.
 Seek medical advice.

If swallowed : Rinse mouth with water.
 Do NOT induce vomiting.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Consult a physician if necessary.

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.

Unsuitable extinguishing media : None known.

Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Do not allow run-off from fire fighting to enter drains or water courses.

No data is available on the product itself.

Hazardous combustion products : No data is available on the product itself.

No hazardous combustion products are known

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 : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.

Environmental precautions : Prevent product from entering drains.
Do not allow contact with soil, surface or ground water.

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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep containers tightly closed in a cool, well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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

Contains no substances with occupational exposure limit values.

Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines
Combined particulates and organic vapour type
- Hand protection
- Material : butyl-rubber
- Break through time : > 8 h
- Material : Nitrile rubber
- Material : Neoprene
- Break through time : 10 - 480 min
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Eye protection : Safety glasses
- Skin and body protection : Protective suit
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using do not eat, drink or smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Colour : amber

Odour : amine-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 : 135 °C
Method: Pensky-Martens closed cup

Evaporation rate : No data is available on the product itself.

Flammability (solid, gas) : No data is available on the product itself.

Flammability (liquids) : No data is available on the product itself.

Upper explosion limit : No data is available on the product itself.

Lower explosion limit : No data is available on the product itself.

Vapour pressure : < 10 hPa (20 °C)

Relative vapour density : No data is available on the product itself.

Relative density : 0.95

Density : 0.95 g/cm³ (25 °C)

Solubility(ies)

Water solubility : partly soluble (20 °C)

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.

Decomposition temperature : > 200 °C

Self-Accelerating decomposition temperature (SADT) : No data is available on the product itself.

Viscosity

Viscosity, dynamic : 30,000 mPa.s (25 °C)

Explosive properties : No data is available on the product itself.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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.
Chemical stability : No decomposition if stored and applied as directed.
Stable under normal conditions.
Possibility of hazardous reactions : Stable under normal conditions.
Conditions to avoid : None known.
Incompatible materials : Strong acids and strong bases
Strong oxidizing agents
Hazardous decomposition products : Carbon oxides
Nitrogen oxides (NO_x)
Burning produces noxious and toxic fumes.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Acute oral toxicity - Product : Assessment: The component/mixture is low toxic after single ingestion.

Acute inhalation toxicity : No data available

Acute dermal toxicity - Product : Assessment: The component/mixture is moderately toxic after single contact with skin.

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

Skin corrosion/irritation**Components:**

polyamide resin:
Assessment: Irritating to skin.

trientine:
Species: Rabbit
Assessment: Causes burns.
Method: OECD Test Guideline 404
Result: Causes burns.

HARDENER 9615 US

Version Revision Date: SDS Number: Date of last issue: -
1.0 04/19/2017 400001010564 Date of first issue: 04/19/2017

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

polyamide resin:
Assessment: Irritating to eyes.

trientine:
Species: Rabbit
Result: Corrosive
Assessment: Corrosive
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Product:**

Result: May cause sensitisation by skin contact.

Assessment: No data available

Germ cell mutagenicity**Components:**

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

Components:

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

Carcinogenicity**Components:**

trientine:
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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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 identified as a carcinogen or potential carcinogen by OSHA.

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

Effects on fertility : No data available

Components:

trientine:

Effects on foetal development

: 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

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity**Components:**

trientine:

Species: Rat, male and female

NOAEL: 50 mg/kg/d

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Application Route: Ingestion
Exposure time: 26 Weeks
Number of exposures: 7 d
Method: Subchronic toxicity

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:**

trientine:

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

HARDENER 9615 US

Version 1.0 Revision Date: 04/19/2017 SDS Number: 400001010564 Date of last issue: -
Date of first issue: 04/19/2017

Components:

trientine:

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:

trientine:

Toxicity to algae : 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

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

Toxicity to fish (Chronic toxicity) : No data available

Components:

trientine:

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

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

Components:

trientine:

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

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

Ecotoxicology Assessment Acute aquatic toxicity : No data available

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Components:

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

Toxicity Data on Soil : No data available

Other organisms relevant to the environment : No data available

Persistence and degradability**Components:**

trientine:
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

Photodegradation : No data available

Impact on Sewage Treatment : No data available

Bioaccumulative potential

Bioaccumulation : No data available

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

Components:

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

Mobility in soil

Mobility : No data available

Components:

trientine:
 Distribution among : Koc: 1584.9 - 5012Method: OECD Test Guideline 106
 environmental compartments
 Stability in soil : No data available

Other adverse effects

Environmental fate and : No data available
 pathways

Results of PBT and vPvB : No data available
 assessment

Endocrine disrupting : No data available
 potential

Adsorbed organic bound : No data available
 halogens (AOX)

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 : No data available
 information

Global warming potential : No data available
 (GWP)

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Can be landfilled or incinerated, when in compliance with local
 regulations.
 Where possible recycling is preferred to disposal or
 incineration.
 Send to a licensed waste management company.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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

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

Not regulated as dangerous goods

IMDG

Not regulated as dangerous goods

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**

Not regulated as dangerous goods

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

SARA 311/312 Hazards : Acute Health Hazard

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

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

CH INV : Low volume exemption, The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

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

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

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

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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

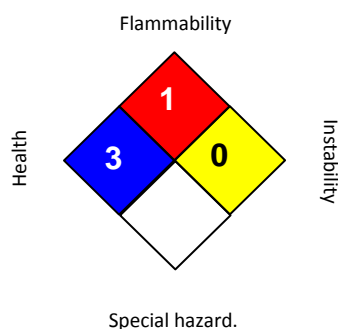
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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.

SECTION 16. OTHER INFORMATION**Further information****NFPA:****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 : 04/19/2017

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.

HARDENER 9615 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	04/19/2017	400001010564	Date of first issue: 04/19/2017

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.