

**Safety Data Sheet**  
according to 1907/2006/EC (REACH),  
1272/2008/EC (CLP), and GHS

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Revision: 08/03/2016

## 1 Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Epoxy Hardener (556) 2:1 Slow Cure
- **1.2 Application of the substance / the preparation:**  
Epoxy curing agent  
Amino resin
- **1.3 Details of the supplier of the Safety Data Sheet**  
**Supplier:**  
U.S. Composites, Inc.  
6670 White Drive  
West Palm Beach, FL 33407 USA  
Phone: (561)842-6121
- **Further information obtainable from:** Product Safety Department
- **1.4 Emergency telephone number:**  
: Chemtrec: (800) 424-9300 or (703) 527-3887



## 2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
  -  GHS08 health hazard  
Repr. 2; H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
  -  GHS05 corrosion  
Skin Corr. 1B; H314: Causes severe skin burns and eye damage.
  -  GHS09 environment  
Aquatic Acute 1; H400: Very toxic to aquatic life.  
Aquatic Chronic 1; H410: Very toxic to aquatic life with long lasting effects.
  -  GHS07  
Acute Tox. 4; H302: Harmful if swallowed.  
Acute Tox. 4; H312: Harmful in contact with skin.  
Skin Sens. 1; H317: May cause an allergic skin reaction.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
  -  C; Corrosive  
R34: Causes burns.

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 Xn; Harmful

R21/22-62-63: Harmful in contact with skin and if swallowed. Possible risk of impaired fertility. Possible risk of harm to the unborn child.

 Xi; Sensitising

R43: May cause sensitisation by skin contact.

 N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

Polyetheramine

nonylphenol

2-piperazin-1-ylethylamine

· **Hazard statements**

H302+H312: Harmful if swallowed or in contact with skin.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H410: Very toxic to aquatic life with long lasting effects.

Contains 2-piperazin-1-ylethylamine. May produce an allergic reaction.

· **Precautionary statements**

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P261: Avoid breathing dust/fume/gas/mist/vapours/spray.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P281: Use personal protective equipment as required.

P273: Avoid release to the environment.

P264: Wash thoroughly after handling.

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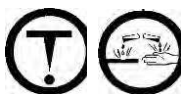
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- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P321: Specific treatment (see on this label).
- P322: Specific measures (see on this label).
- P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312: Call a POISON CENTER or doctor/physician if you feel unwell.
- P363: Wash contaminated clothing before reuse.
- P308+P313: IF exposed or concerned: Get medical advice/attention.
- P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
- P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P330: Rinse mouth.
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P391: Collect spillage.
- P405: Store locked up.
- P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Hazard description:**

· **WHMIS-symbols:**

- D2A - Very toxic material causing other toxic effects
- E - Corrosive material



· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



\* - Indicates a long term health hazard from repeated or prolonged exposures.

· **HMIS Long Term Health Hazard Substances**

25154-52-3	nonylphenol
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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 9046-10-0	Polyetheramine  C R34;  Xn R21/22 R52/53  Skin Corr. 1B, H314  Acute Tox. 4, H302; Acute Tox. 4, H312  Aquatic Chronic 3, H412	40-55%
CAS: 25154-52-3 EINECS: 246-672-0 Index number: 601-053-00-8	nonylphenol  C R34;  Xn R22-62-63;  N R50/53 Repr. Cat. 3  Repr. 2, H361fd  Skin Corr. 1B, H314  Aquatic Acute 1, H400; Aquatic Chronic 1, H410  Acute Tox. 4, H302	30-45%
CAS: 140-31-8 EINECS: 205-411-0 Index number: 612-105-00-4	2-piperazin-1-ylethylamine  C R34;  Xn R21/22;  Xi R43 R52/53  Skin Corr. 1B, H314  Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317  Aquatic Chronic 3, H412	10-30%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

· **4.1 Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

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- **After eye contact:**  
Protect unharmed eye.  
Remove contact lenses if worn.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Do not induce vomiting; call for medical help immediately.  
Rinse out mouth and then drink plenty of water.  
Call for a doctor immediately.  
Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**  
Allergic reactions  
Gastric or intestinal disorders  
Nausea  
Breathing difficulty
- **Hazards** Danger of gastric perforation.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
If swallowed, gastric irrigation with added, activated carbon.  
Monitor circulation, possible shock treatment.  
Medical supervision for at least 48 hours.  
Treat skin and mucous membrane with antihistamine and corticoid preparations.

## 5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** Cool endangered receptacles with water spray.

## 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Clean the affected area carefully; suitable cleaners are:  
Warm water and cleansing agent  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

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- Use neutralizing agent.
- Dispose contaminated material as waste according to item 13.
- Ensure adequate ventilation.
- **6.4 Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

## 7 Handling and storage

- **7.1 Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **Information about storage in one common storage facility:** Store away from foodstuffs.
  - **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Respiratory protection:**
  - Use suitable respiratory protective device when aerosol or mist is formed.
  - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

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The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Contact lenses should not be worn.

· **Body protection:** Protective work clothing

## 9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Colour:</b>	Light yellow
· <b>Odour:</b>	Amine-like
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	> 225°C (> 437 °F)

· **Flash point:** > 100°C (> 212 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 315°C (599 °F)

· **Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· <b>Lower:</b>	1,0 Vol %
· <b>Upper:</b>	10,5 Vol %

· **Vapour pressure at 20°C:** 0,1 hPa

· **Density at 20°C:** 1 g/cm<sup>3</sup>

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· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic at 20°C:	400 mPas
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Organic solvents:	0,0 %
· <b>9.2 Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Reacts with strong acids and oxidizing agents.  
Reacts with peroxides and other radical forming substances.  
Exothermic polymerization.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**  
Aldehyde  
Nitrogen oxides  
Ammonia  
Carbon monoxide

## 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

**25154-52-3 nonylphenol**

Oral LD50 1620 mg/kg (rat)

**140-31-8 2-piperazin-1-ylethylamine**

Oral LD50 2140 mg/kg (rat)

Dermal LD50 880 mg/kg (rabbit)

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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:**  
Sensitizing effect through inhalation is possible by prolonged exposure.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

## 12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** The product contains materials that are harmful to the environment.
- **12.2 Persistence and degradability** The product is partly biodegradable. Significant residuals remain.
- **12.3 Bioaccumulative potential**  
Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Must not reach sewage water or drainage ditch undiluted or unneutralized.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **13.1 Waste treatment methods**
  - **Recommendation**  
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.  
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
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Must not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

**14 Transport information**

- **14.1 UN-Number**
- **DOT, ADR, IMDG, IATA** UN1760
- **14.2 UN proper shipping name**
- **DOT, IATA** Corrosive Liquid, N.O.S. (nonylphenol, Polyetheramine)
- **ADR** 1760 Corrosive Liquid, N.O.S. (nonylphenol, Polyetheramine), Environmentally Hazardous
- **IMDG** Corrosive Liquid, N.O.S. (nonylphenol, Polyetheramine), Marine Pollutant

· **14.3 Transport hazard class(es)**

· **DOT**



- **Class** 8 Corrosive substances.
- **Label** 8

· **ADR**



- **Class** 8 (C9) Corrosive substances.
- **Label** 8

· **IMDG**



- **Class** 8 Corrosive substances.
- **Label** 8

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· IATA



· Class 8 Corrosive substances.  
 · Label 8

· 14.4 Packing group II  
 · DOT, ADR, IMDG, IATA

· 14.5 Environmental hazards: Product contains environmentally hazardous substances: nonylphenol  
 · Marine pollutant: Yes  
 Symbol (fish and tree)  
 · Special marking (ADR): Symbol (fish and tree)

· 14.6 Special precautions for user Warning: Corrosive substances.  
 · Danger code (Kemler): 80  
 · EMS Number: F-A,S-B  
 · Segregation groups Alkalis

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR  
 · Tunnel restriction code E

· UN "Model Regulation": UN1760, Corrosive Liquid, N.O.S. (nonylphenol, Polyetheramine), Environmentally Hazardous, 8, II

**15 Regulatory information**

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
 · United States (USA)  
 · SARA

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Canada**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

Ingredients are listed as required.

25154-52-3	nonylphenol
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140-31-8	2-piperazin-1-ylethylamine
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· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

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H412: Harmful to aquatic life with long lasting effects.

R21/22: Harmful in contact with skin and if swallowed.

R22: Harmful if swallowed.

R34: Causes burns.

R43: May cause sensitisation by skin contact.

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62: Possible risk of impaired fertility.

R63: Possible risk of harm to the unborn child.

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent