

Printing date 11/10/2017

Reviewed on 11/10/2017

1 Identification

- **Product identifier**
- **Trade name:** SC 175 Orange Hardener
- **Article number:** 1026078
- **Application of the substance / the mixture** Epoxy curing agent
- **Details of the supplier of the safety data sheet** SikaAxson US - EHS Department
- **Manufacturer/Supplier:**
Company Name: Axson Technologies US, Inc.-SikaAxson

Headquarters:
31200 Stephenson Hwy
Madison Heights, MI 48071
USA

Manufacturing Site:
1611 Hults Drive
Eaton Rapids, MI 48827
USA
ehs-us@axson.com

- **Information department:** Product safety department
- **Emergency telephone number:**
During normal opening times: +1 (248) 588-2270
CHEMTREC 24-hour Emergency: +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Repr. 1 H360 May damage fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· Hazard pictograms


GHS05 GHS07 GHS08

· Signal word Danger
· Hazard-determining components of labeling:

Polypropylene glycol
 2-piperazin-1-ylethylamine
 Trimethylolpropane poly(oxypropylene)triamine

· Hazard statements

Harmful if swallowed.
 Causes severe skin burns and eye damage.
 May cause an allergic skin reaction.
 May damage fertility or the unborn child.

· Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray
 Do not breathe dusts or mists.
 Wear protective gloves/protective clothing/eye protection/face protection.
 If swallowed: Call a poison center/doctor if you feel unwell.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 Specific treatment (see on this label).
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
· NFPA ratings (scale 0 - 4)


Health = 3

Fire = 1

Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH	3	Health = 3
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

· Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 25322-69-4	Polypropylene glycol	20-50%
CAS: 39423-51-3	Trimethylolpropane poly(oxypropylene)triamine	10-20%
CAS: 67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	5-10%
CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-ylethylamine	5-10%
CAS: 872-50-4 EINECS: 212-828-1	N-methyl-2-pyrrolidone	0.1-1%

4 First-aid measures

- **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.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

25322-69-4	Polypropylene glycol	30 mg/m ³
39423-51-3	Trimethylolpropane poly(oxypropylene)triamine	30 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	120 mg/m ³
140-31-8	2-piperazin-1-ylethylamine	6.4 mg/m ³
78-78-4	isopentane	3000* ppm
872-50-4	N-methyl-2-pyrrolidone	30 ppm
1309-42-8	magnesium hydroxide	26 mg/m ³
14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
80-08-0	dapsone	2 mg/m ³

· **PAC-2:**

25322-69-4	Polypropylene glycol	330 mg/m ³
39423-51-3	Trimethylolpropane poly(oxypropylene)triamine	330 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	1,300 mg/m ³
140-31-8	2-piperazin-1-ylethylamine	71 mg/m ³
78-78-4	isopentane	33000*** ppm
872-50-4	N-methyl-2-pyrrolidone	32 ppm
1309-42-8	magnesium hydroxide	280 mg/m ³
14808-60-7	Quartz (SiO ₂)	33 mg/m ³
80-08-0	dapsone	22 mg/m ³

· **PAC-3:**

25322-69-4	Polypropylene glycol	2,000 mg/m ³
39423-51-3	Trimethylolpropane poly(oxypropylene)triamine	2,000 mg/m ³
67762-90-7	Silicones and siloxanes, dimethyl-, reaction products with silica	7,900 mg/m ³
140-31-8	2-piperazin-1-ylethylamine	420 mg/m ³
78-78-4	isopentane	200000*** ppm

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872-50-4	<i>N</i> -methyl-2-pyrrolidone	190 ppm
1309-42-8	magnesium hydroxide	1,700 mg/m ³
14808-60-7	Quartz (SiO ₂)	200 mg/m ³
80-08-0	dapsone	78 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
 At this time, the other constituents have no known exposure limits.

872-50-4 *N*-methyl-2-pyrrolidone

WEEL	Long-term value: 10 ppm
	Skin

- **Ingredients with biological limit values:**

872-50-4 *N*-methyl-2-pyrrolidone

BEI	100 mg/L
	Medium: urine
	Time: end of shift
	Parameter: 5-Hydroxy- <i>N</i> -methyl-2-pyrrolidone

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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.
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

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· Protection of hands:



Protective gloves

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:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Pasty
Color:	Orange
· Odor:	Amine-like
· Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	220.4 °C (428.7 °F)

· Flash point: 102 °C (215.6 °F)

· Flammability (solid, gaseous): Not applicable.

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

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

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

· Explosion limits:

Lower:	Not determined.
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Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	6.8 hPa (5.1 mm Hg)
· Density at 20 °C (68 °F):	0.62 g/cm ³ (5.17 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.7 %
VOC content:	0.69 %
	4.3 g/l / 0.04 lb/gl
· Solids content:	38.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

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

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

Oral	LD50	220 mg/kg (rat)
Dermal	LD50	610 mg/kg (rabbit)
25322-69-4 Polypropylene glycol		
Oral	LD50	541 mg/kg (rat)
Dermal	LD50	>10,000 mg/kg (rabbit)
39423-51-3 Trimethylolpropane poly(oxypropylene)triamine		
Oral	LD50	200 mg/kg (rat)

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Dermal	LD50	>2,000 mg/kg (rat)
140-31-8 2-piperazin-1-ylethylamine		
Oral	LD50	2,110 mg/kg (rat)
Dermal	LD50	866 mg/kg (rabbit)

· Primary irritant effect:
· on the skin: Caustic effect on skin and mucous membranes.

· on the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

· Sensitization: Sensitization possible through skin contact.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

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.

· Carcinogenic categories
· IARC (International Agency for Research on Cancer)

14808-60-7	Quartz (SiO ₂)	1
80-08-0	dapsone	3

· NTP (National Toxicology Program)

14808-60-7	Quartz (SiO ₂)	K
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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity
· Aquatic toxicity:

39423-51-3 Trimethylolpropane poly(oxypropylene)triamine	
48 hr EC50 (static)	13 mg/l (daphnia)
72 or 96 hr ErC50 (static)	4.4 mg/l (Algae)
NOEC (static)	1 mg/l (Algae)
140-31-8 2-piperazin-1-ylethylamine	
48 hr EC50	58 mg/l (Invertebrates)
96 hr LC50	2,190 mg/l (Fish)
72 or 96 hr ErC50	1,000 mg/l (Algae)

· Persistence and degradability No further relevant information available.

· Behavior in environmental systems:
· Bioaccumulative potential No further relevant information available.

· Mobility in soil No further relevant information available.

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· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (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 bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT**

NA3082

· **IMDG, IATA**

UN3082

· **UN proper shipping name**

· **DOT**

Environmentally hazardous substances, liquid, n.o.s. (Propoxylated Triamine, Pentanes)

· **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propoxylated Triamine, PENTANES), MARINE POLLUTANT

· **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Propoxylated Triamine, PENTANES)

· **Transport hazard class(es)**

· **DOT, IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

· **DOT, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances: Propoxylated Triamine

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· Marine pollutant:	Yes Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles
· Danger code (Kemler):	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: No limit On cargo aircraft only: No limit
· Remarks:	Special marking with the symbol (fish and tree).
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (PROPOXYLATED TRIAMINE, PENTANES), 9, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):	None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):	872-50-4 N-methyl-2-pyrrolidone
· TSCA (Toxic Substances Control Act) (Substances not listed):	All ingredients are listed.
· Chemicals regulated by TSCA Section 12(b)	None of the ingredients is listed.
· Chemical regulated by TSCA 5(a)(2)rule:	None of the ingredients is listed.
· TSCA new (21st Century Act) (Substances not listed)	39423-51-3 Trimethylolpropane poly(oxypropylene)triamine

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· **Proposition 65**

· **Chemicals known to cause cancer:**

1317-65-3	Calcium Carbonate
14808-60-7	Quartz (SiO ₂)

· **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:**

872-50-4	N-methyl-2-pyrrolidone
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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

14808-60-7	Quartz (SiO ₂)	A2
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	Quartz (SiO ₂)
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· **Listed in CWC Regulations**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** Danger

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

Polypropylene glycol
2-piperazin-1-ylethylamine
Trimethylolpropane poly(oxypropylene)triamine

· **Hazard statements**

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.

· **Precautionary statements**

Do not breathe dusts or mists.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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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.
Specific treatment (see on this label).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
 · **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.

 · **Date of preparation / last revision** 11/10/2017 / 6

 · **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

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 1: Reproductive toxicity – Category 1