Safety Data Sheet
acc. to OSHA HCS

Printing date 03/07/2018 Reviewed on 03/07/2018

1 Identification

· **Product identifier**

· **Trade name: TCC102 Hardener**

· **Article number:** I070102
· **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**

GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.

GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.
Repr. 2 H361 Suspected of damaging 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.

GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

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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.*
STOT SE 3	*H335*	*May cause respiratory irritation.*
Aquatic Acute 2	*H401*	*Toxic to aquatic life.*

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

GHS05 GHS06 GHS07 GHS08 GHS09

· ***Signal word*** *Danger*

· ***Hazard-determining components of labeling:***
3,6-diazaoctanethylenediamin
2,2'-iminodiethylamine
4-nonylphenol, branched
bisphenol A
butyl glycidyl ether
· ***Hazard statements***
Harmful if swallowed or in contact with skin.
Toxic if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.
· ***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.

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

Health = 3
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

*Health = *3*
Fire = 1
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

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

· **Dangerous components:**		
CAS: 112-24-3 EINECS: 203-950-6	3,6-diazaoctanethylenediamin	≥25-≤50%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonylphenol, branched	10-20%
CAS: 111-40-0 EINECS: 203-865-4	2,2'-iminodiethylamine	10-20%
CAS: 80-05-7 EINECS: 201-245-8	bisphenol A	10-20%
CAS: 2426-08-6 EINECS: 219-376-4	butyl glycidyl ether	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.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
· **After inhalation:**
Supply fresh air or oxygen; call for 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.

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· **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:**
Mouth respiratory protective device.
Wear self-contained respiratory protective device.
· **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
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:**		
112-24-3	3,6-diazaoctanethylenediamin	3 ppm
84852-15-3	4-nonylphenol, branched	3.9 mg/m³
111-40-0	2,2'-iminodiethylamine	3 ppm
80-05-7	bisphenol A	15 mg/m³
2426-08-6	butyl glycidyl ether	9 ppm

· **PAC-2:**		
112-24-3	3,6-diazaoctanethylenediamin	14 ppm
84852-15-3	4-nonylphenol, branched	43 mg/m³

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111-40-0	2,2'-iminodiethylamine	8.5 ppm
80-05-7	bisphenol A	110 mg/m³
2426-08-6	butyl glycidyl ether	580 ppm

· **PAC-3:**

112-24-3	3,6-diazaoctanethylenediamin	83 ppm
84852-15-3	4-nonylphenol, branched	260 mg/m³
111-40-0	2,2'-iminodiethylamine	51 ppm
80-05-7	bisphenol A	650 mg/m³
2426-08-6	butyl glycidyl ether	3,500 ppm

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:** Keep respiratory protective device available.

· **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 constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

112-24-3 3,6-diazaoctanethylenediamin	
WEEL	Long-term value: 6 mg/m³, 1 ppm Skin
111-40-0 2,2'-iminodiethylamine	
REL	Long-term value: 4 mg/m³, 1 ppm Skin
TLV	Long-term value: 4.2 mg/m³, 1 ppm Skin
2426-08-6 butyl glycidyl ether	
PEL	Long-term value: 270 mg/m³, 50 ppm

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REL	*Ceiling limit value: 30 mg/m³, 5.6 ppm* **15-min*
TLV	*Long-term value: 16 mg/m³, 3 ppm* *Skin; DSEN*

· ***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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· ***Breathing equipment:***
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· ***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:	*Liquid*
Color:	*Amber colored*
· ***Odor:***	*Amine-like*

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· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	207.1 °C (404.8 °F)
· **Flash point:**	122 °C (251.6 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	325 °C (617 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	1 Vol %
Upper:	10 Vol %
· **Vapor pressure at 20 °C (68 °F):**	0.5 hPa (0.4 mm Hg)
· **Density at 20 °C (68 °F):**	1.02 g/cm³ (8.51 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:**	
VOC content:	0.00 % 0.0 g/l / 0.00 lb/gl
Solids content:	11.1 %
· **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:**
Aldehyde

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Carbon monoxide and carbon dioxide

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
112-24-3 3,6-diazaoctanethylenediamin		
Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	805 mg/kg (rabbit)
111-40-0 2,2'-iminodiethylamine		
Oral	LD50	1,553 mg/kg (rat)
Dermal	LD50	1,045 mg/kg (rabbit)
Inhalative	LC50/4 h	0.3 mg/l (rat)
80-05-7 bisphenol A		
Oral	LD50	3,250 mg/kg (rat)
Dermal	LD50	3,000 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:
Toxic
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)
None of the ingredients is listed.

· NTP (National Toxicology Program)
None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.

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· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **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.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
· **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**	NA2735
· **IMDG, IATA**	UN2735
· **UN proper shipping name**	
· **DOT**	Amines, liquid, corrosive, n.o.s. (Triethylenetetramine, Diethylenetriamine)
· **IMDG**	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE, DIETHYLENETRIAMINE), MARINE POLLUTANT
· **IATA**	AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE, DIETHYLENETRIAMINE)
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8 Corrosive substances

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· **Label**	8
· **IMDG**	
	
· **Class**	8 Corrosive substances
· **Label**	8
· **IATA**	
	
· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: 4-nonylphenol, branched
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special precautions for user**	Warning: Corrosive substances
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" acids.
· **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: 1 L On cargo aircraft only: 30 L
· **Remarks:**	Special marking with the symbol (fish and tree).
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (TRIETHYLENETETRAMINE, DIETHYLENETRIAMINE), 8, II, ENVIRONMENTALLY HAZARDOUS

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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):**

84852-15-3	4-nonylphenol, branched
80-05-7	bisphenol A

· **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)**
· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

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

80-05-7	bisphenol A

· **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.

· **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 GHS06 GHS07 GHS08 GHS09

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· **Signal word** Danger

· **Hazard-determining components of labeling:**
3,6-diazaoctanethylenediamin
2,2'-iminodiethylamine
4-nonylphenol, branched
bisphenol A
butyl glycidyl ether

· **Hazard statements**
Harmful if swallowed or in contact with skin.
Toxic if inhaled.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause respiratory irritation.
Toxic to aquatic life.
Toxic to aquatic life with long lasting effects.

· **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.
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** 03/07/2018 / 4

· **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

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NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
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
Carc. 2: Carcinogenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2