



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**1 Identification**

- **Product identifier**
- **Trade name:** TCC 205 Resin
- **Article number:** 1820088-1
- **Application of the substance / the mixture**  
 Epoxy resin  
 Epoxy resin
- **Details of the supplier of the safety data sheet**  
 Sika Advanced Resins, US  
 EHS Department
- **Manufacturer/Supplier:**  
 Supplier's Name: Sika Advanced Resins, US  
 Headquarters:  
 30800 Stephenson Hwy  
 Madison Heights, MI 48071  
 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**



GHS09 Environment

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.  
 Eye Irrit. 2A H319 Causes serious eye irritation.  
 Skin Sens. 1 H317 May cause an allergic skin reaction.  
 Aquatic Acute 3 H402 Harmful to aquatic life.

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

(Contd. on page 2)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 1)

**Hazard pictograms**



GHS07 GHS09

**Signal word** Warning

**Hazard-determining components of labeling:**

Reaction Product of Bisphenol A and Epichlorohydrin  
 oxirane, mono[(C12-14-alkyloxy)methyl] derivs  
 Alkyl C12-C14 Glycidyl Ether  
 Bis(1,2,2,6,6-pentamethyl-4-piperidyl sebacate)

**Hazard statements**

Causes skin irritation.  
 Causes serious eye irritation.  
 May cause an allergic skin reaction.  
 Harmful to aquatic life.  
 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Avoid release to the environment.  
 Wear protective gloves / eye protection / face protection.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Specific treatment (see on this label).  
 If eye irritation persists: Get medical advice/attention.  
 Wash contaminated clothing before reuse.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:**

**NFPA ratings (scale 0 - 4)**



Health = 2  
 Fire = 1  
 Reactivity = 0

**HMIS-ratings (scale 0 - 4)**



Health = 2  
 Fire = 1  
 Reactivity = 0

(Contd. on page 3)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 2)

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

**3 Composition/information on ingredients**

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

· **Dangerous components:**

CAS: 25068-38-6 NLP: 500-033-5	Reaction Product of Bisphenol A and Epichlorohydrin	50-100%
CAS: 68609-97-2 EINECS: 271-846-8	oxirane, mono[(C12-14-alkyloxy)methyl] derivs Alkyl C12-C14 Glycidyl Ether	10-20%
CAS: 41556-26-7	Bis(1,2,2,6,6-pentamethyl-4-piperidyl sebacate	≥0.25-<1%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult 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.



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

Trade name: TCC 205 Resin

(Contd. of page 3)

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
 Do not allow product to reach sewage system or any water course.  
 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).  
 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:**

25068-38-6	Reaction Product of Bisphenol A and Epichlorohydrin	90 mg/m <sup>3</sup>
------------	---	----------------------

· **PAC-2:**

25068-38-6	Reaction Product of Bisphenol A and Epichlorohydrin	990 mg/m <sup>3</sup>
------------	---	-----------------------

· **PAC-3:**

25068-38-6	Reaction Product of Bisphenol A and Epichlorohydrin	5,900 mg/m <sup>3</sup>
------------	---	-------------------------

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.
- **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.

(Contd. on page 5)



**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 4)

- **Control parameters**
- **Components 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 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 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



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

Trade name: TCC 205 Resin

(Contd. of page 5)

**9 Physical and chemical properties**

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

· **General Information**

· **Appearance:**

· **Form:** Liquid  
 · **Color:** Whitish  
 · **Odor:** Amine-like  
 · **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· **Melting point/Melting range:** Undetermined.  
 · **Boiling point/Boiling range:** Undetermined.

· **Flash point:** 150 °C (302 °F)

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

· **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.  
 · **Upper:** Not determined.

· **Vapor pressure:** Not determined.

· **Density at 20 °C (68 °F):** 1.13 g/cm<sup>3</sup> (9.43 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:** 0.70 %  
 7.9 g/l / 0.07 lb/gal

· **Solids content:** 0.0 %

(Contd. on page 7)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 6)

· **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:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
 The product shows the following dangers according to internally approved calculation methods for preparations:  
 Irritant
- **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.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 8)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 7)

- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water*  
*Do not allow product to reach ground water, water course or sewage system.*  
*Danger to drinking water if even 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** *not regulated*
- **IMDG, IATA** *UN3082*
- **UN proper shipping name**
- **DOT** *not regulated*
- **IMDG** *ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin), MARINE POLLUTANT*
- **IATA** *ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin)*
- **Transport hazard class(es)**
- **DOT**
- **Class** *not regulated*

(Contd. on page 9)





**Safety Data Sheet**  
 acc. to OSHA HCS

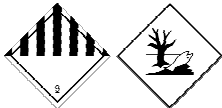
Printing date 10/26/2019

Reviewed on 10/26/2019

Trade name: TCC 205 Resin

(Contd. of page 8)

· **IMDG, IATA**



· **Class** 9 Miscellaneous dangerous substances and articles  
 · **Label** 9

· **Packing group**  
 · **DOT** not regulated  
 · **IMDG, IATA** III

· **Environmental hazards:** Product contains environmentally hazardous substances:  
 Bis(1,2,2,6,6-pentamethyl-4-piperidyl sebacate, Epoxy Resin  
 · **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:**

· **IMDG**  
 · **Limited quantities (LQ)** 5L  
 · **Exempted 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 SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN), 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):**  
 95-63-6 | 1,2,4-trimethylbenzene

(Contd. on page 10)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 9)

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **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.

· **Hazardous Air Pollutants**

98-82-8 cumene

· **Proposition 65**

· **Chemicals known to cause cancer:**

98-82-8 cumene

· **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**

· **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**



GHS07 GHS09

· **Signal word** Warning

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

Reaction Product of Bisphenol A and Epichlorohydrin  
 oxirane, mono[(C12-14-alkyloxy)methyl] derivs  
 Alkyl C12-C14 Glycidyl Ether  
 Bis(1,2,2,6,6-pentamethyl-4-piperidyl sebacate

(Contd. on page 11)



**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 10/26/2019

Reviewed on 10/26/2019

**Trade name: TCC 205 Resin**

(Contd. of page 10)

· **Hazard statements**

- Causes skin irritation.
- Causes serious eye irritation.
- May cause an allergic skin reaction.
- Harmful to aquatic life.
- Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

- Avoid breathing dust/fume/gas/mist/vapors/spray
- Avoid release to the environment.
- Wear protective gloves / eye protection / face protection.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Take off contaminated clothing and wash it before reuse.
- If skin irritation or rash occurs: Get medical advice/attention.
- Specific treatment (see on this label).
- If eye irritation persists: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- 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** 10/26/2019 / 4

· **Abbreviations and acronyms:**

- 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)
- 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
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
- Skin Sens. 1: Skin sensitisation – Category 1
- Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· **\* Data compared to the previous version altered.**



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**1 Identification**

- **Product identifier**
- **Trade name:** TCC104 Hardener
- **Article number:** R151378-2
- **Application of the substance / the mixture** Epoxy curing agent
- **Details of the supplier of the safety data sheet**  
 Sika Advanced Resins, US  
 EHS Department
- **Manufacturer/Supplier:**  
 Supplier's Name: Sika Advanced Resins, US  
 Headquarters:  
 30800 Stephenson Hwy  
 Madison Heights, MI 48071  
 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**



GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

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).
- **Hazard pictograms**



GHS05



GHS07



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 1)

· **Signal word** *Danger*

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

*Teta, reaction products with propylene oxide  
 Polyoxylated Triethylenetetramine  
 3,6-diazaoctanethylenediamin*

· **Hazard statements**

*Causes severe skin burns and eye damage.  
 May cause an allergic skin reaction.*

· **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 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).*

*Wash contaminated clothing before reuse.*

*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*

*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.*

(Contd. on page 3)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 2)

<b>· Dangerous components:</b>		
CAS: 26950-63-0	Teta, reaction products with propylene oxide Polyoxylated Triethylenetetramine	50-100%
CAS: 112-24-3 EINECS: 203-950-6	3,6-diazaoctanethylenediamin	10-20%

**4 First-aid measures**

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **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:** 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**  
During heating or in case of fire poisonous gases are produced.
- **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**  
Mount respiratory protective device.  
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).

(Contd. on page 4)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 3)

- 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**

· <b>PAC-1:</b>		
112-24-3	3,6-diazaoctanethylenediamin	3 ppm
· <b>PAC-2:</b>		
112-24-3	3,6-diazaoctanethylenediamin	14 ppm
· <b>PAC-3:</b>		
112-24-3	3,6-diazaoctanethylenediamin	83 ppm

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- **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 constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
- At this time, the remaining constituent has no known exposure limits.

<b>112-24-3 3,6-diazaoctanethylenediamin</b>	
WEEL	Long-term value: 6 mg/m <sup>3</sup> , 1 ppm
	Skin

(Contd. on page 5)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 4)

· **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:**

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:** Characteristic

(Contd. on page 6)





**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 5)

· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b> <b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	~278 °C (~532.4 °F)
· <b>Flash point:</b>	135 °C (275 °F)
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	335 °C (635 °F)
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	2 Vol %
<b>Upper:</b>	6.7 Vol %
· <b>Vapor pressure:</b>	Not determined.
· <b>Density at 20 °C (68 °F):</b>	1 g/cm <sup>3</sup> (8.35 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b> <b>Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
<b>Solids content:</b>	0.0 %
· <b>Other information</b>	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.

(Contd. on page 7)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 6)

- **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:**

**112-24-3 3,6-diazaoctanethylenediamin**

Oral	LD50	2,000 mg/kg (rat)
Dermal	LD50	2,000 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:  
 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.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 8)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 7)

- **Additional ecological information:**
- **General notes:**  
*Water hazard class 2 (Self-assessment): hazardous for water  
 Do not allow product to reach ground water, water course or sewage system.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even 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**

· <b>UN-Number</b>	
· <b>DOT, ADN, IMDG, IATA</b>	not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADN, IMDG, IATA</b>	not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADN, IMDG, IATA</b>	
· <b>Class</b>	not regulated
· <b>Packing group</b>	
· <b>DOT, IMDG, IATA</b>	not regulated
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not regulated



**Safety Data Sheet**  
*acc. to OSHA HCS*

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 8)

**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):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **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.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **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.

· **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).

(Contd. on page 10)



**Safety Data Sheet**  
 acc. to OSHA HCS

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 9)

**Hazard pictograms**



GHS05 GHS07

**Signal word** *Danger*

**Hazard-determining components of labeling:**

*Teta, reaction products with propylene oxide  
 Polyoxylated Triethylenetetramine  
 3,6-diazaoctanethylenediamin*

**Hazard statements**

*Causes severe skin burns and eye damage.  
 May cause an allergic skin reaction.*

**Precautionary statements**

*Do not breathe dusts or mists.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 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).  
 Wash contaminated clothing before reuse.  
 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** 10/12/2019 / 6

**Abbreviations and acronyms:**

*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*

(Contd. on page 11)



DISTRIBUTED BY  
Freeman Mfg. & Supply Co.  
www.FreemanSupply.com

BUILDING TRUST



Page 11/11

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 10/12/2019

Reviewed on 10/12/2019

**Trade name: TCC104 Hardener**

(Contd. of page 10)

*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*  
*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*  
· **\* Data compared to the previous version altered.**

US