



# SAFETY DATA SHEET

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

Revision date: Dec/1/2016  
Version: 1  
Language: en-US  
Date of print: Dec/5/2016

## WEICON TI Hardener

Material number 104302

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### 1. Product and company identification

#### Product identifier

Trade name: WEICON TI Hardener

#### Relevant identified uses of the substance or mixture and uses advised against

General use: Hardener for 2 component adhesive (epoxy resin).  
Reserved for industrial and professional use.

#### Details of the supplier of the safety data sheet

Company name: WEICON Inc.  
Street/POB-No.: 20 Steckle Place, Unit 20  
Postal Code, city: Kitchener, Ontario N2E 2C3, CA  
WWW: www.weicon.ca  
E-mail: info@weicon.ca  
Telephone: +1-519-896-5252  
Telefax: +1-519-896-5254  
Dept. responsible for information:  
Product-Safety-Department  
Telephone: +49(0)251 / 9322 - 0, Email: msds@weicon.de

#### Emergency phone number

**EMERGENCY CONTACT – USA (24h): Tel: ++1 202 464 2554**

**Transport:**

**TRANSPORT EMERGENCY CONTACT - USA (24h): Tel: ++1 202 464 2554**

### 2. Hazards identification

#### Emergency overview

Appearance: Form: pasty  
Color: white  
Odor: characteristic  
Classification: Acute Toxicity - oral - Category 4; Acute Toxicity - dermal - Category 4;  
Skin Corrosion - Category 1B; Sensitization - skin - Category 1;  
Specific Target Organ Toxicity (Repeated Exposure) - Category 2;  
Aquatic toxicity - chronic - Category 2;

Hazard symbols:



Signal word:

**Danger**

Hazard statements:

Harmful if swallowed.  
Harmful in contact with skin.  
Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
May cause damage to organs through prolonged or repeated exposure.  
Toxic to aquatic life with long lasting effects.



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Precautionary statements: Do not breathe dust/fume/gas/mist/vapors/spray.  
 Wash hands and face thoroughly after handling.  
 Do not eat, drink or smoke when using this product.  
 Contaminated work clothing should not be allowed out of the workplace.  
 Avoid release to the environment.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 IF ON SKIN: Wash with plenty of water/soap.  
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/or 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 ' First aid ' on this label).  
 Specific measures (see ' First aid ' on this label).  
 If skin irritation or rash occurs: Get medical advice/attention.  
 Take off immediately all contaminated clothing and wash it before reuse.  
 Collect spillage.  
 Store locked up.  
 Dispose of contents/container to hazardous or special waste collection point.

### Regulatory status

This material is considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

### Hazards not otherwise classified

see section 11: Toxicological information

## 3. Composition / Information on ingredients

Chemical characterization: Hardener for 2 component adhesive (epoxy resin).

Relevant ingredients:

| CAS No.        | Designation                         | Content   | Classification  |
|----------------|-------------------------------------|-----------|---|
| CAS 1761-71-3  | 4,4'-Methylenebis (cyclohexylamine) | 25 - 50 % | Acute Toxicity - oral - Category 4.<br>Skin Corrosion - Category 1B.<br>Sensitization - skin - Category 1.<br>Specific Target Organ Toxicity (Repeated Exposure) - Category 2.  |
| CAS 68131-73-7 | Amines, polyethylenepoly-           | 1 - 25 %  | Acute Toxicity - oral - Category 4.<br>Acute Toxicity - dermal - Category 4.<br>Skin Corrosion - Category 1B.<br>Sensitization - skin - Category 1.<br>Aquatic toxicity - acute - Category 1.<br>Aquatic toxicity - chronic - Category 1. |
| CAS 4067-16-7  | Pentactylenehexamine                | 1 - 25 %  | Skin Corrosion - Category 1B.<br>Sensitization - skin - Category 1.<br>Aquatic toxicity - acute - Category 1.<br>Aquatic toxicity - chronic - Category 1.   |

## 4. First aid measures

General information: Remove all contaminated clothes and footwear immediately unless stuck to skin.  
Wash contaminated clothing before reuse.



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- In case of inhalation: Supply air by breathing fresh air or artificial respiration. In case of difficulties in breathing give oxygen. If breathing has stopped, give artificial respiration immediately. Keep airway open. Immediately get medical attention.
- Following skin contact: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap. Wash contaminated clothing before reuse. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. Immediately get medical attention.
- After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Continue rinsing. Subsequently seek the immediate attention of an ophthalmologist.
- After swallowing: Remove person to fresh air and keep comfortable for breathing. Do not induce vomiting. Rinse mouth with water. Let water be swallowed in little sips. Immediately get medical attention.  
Never give anything by mouth to an unconscious person.

### Most important symptoms/effects, acute and delayed

Causes severe skin burns and eye damage. May cause an allergic skin reaction. Harmful if swallowed or in contact with skin. May cause damage to organs through prolonged or repeated exposure.  
Caustic effect on skin and mucous membranes. May cause sensitization by skin contact. Bloody lacrimation, Miosis and seizures. Danger of a allergic-anaphylactic shock. Gastrointestinal complaints.

### Information to physician

Treat symptomatically. Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

## 5. Fire fighting measures

- Flash point/flash point range: not applicable
- Auto-ignition temperature: not applicable
- Suitable extinguishing media: Extinguishing is to be in accordance with the surrounding fire.
- Extinguishing media which must not be used for safety reasons: High power water jet

### Specific hazards arising from the chemical

May form dangerous gases and vapours in case of fire. In case of fire may be liberated: nitrogen oxides (NO<sub>x</sub>), carbon monoxide and carbon dioxide.

- Protective equipment and precautions for firefighters: Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing. In case of fire and/or explosion do not breathe fumes.
- Additional information: Cool endangered containers with water jetspray. You have to dispose of contaminated extinguishing water according to the regulations of the authorities. Do not allow fire water to penetrate into surface or ground water.

## 6. Accidental release measures

- Personal precautions: Provide adequate ventilation. In case of inadequate ventilation wear respiratory protection. Avoid generation of dust.  
Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse.  
Avoid breathing dust and vapours. Keep unprotected people away. Avoid contact with skin and eyes.



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### Environmental precautions:

Do not allow to enter into ground-water, surface water or drains. Do not allow to enter into soil/subsoil. If necessary notify appropriate authorities.

### Methods for clean-up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents) and place in closed containers for disposal.

## 7. Handling and storage

### Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. In case of inadequate ventilation wear respiratory protection. Avoid generation of dust. Avoid breathing dust and vapours. Avoid contact with skin and eyes. Wear appropriate protective equipment. Take off immediately all contaminated clothing and wash it before reuse. When using do not eat, drink or smoke. Wash hands before breaks and after work.

### Precautions against fire and explosion:

Take care of general rules for industrial preventive fire protection.

### Storage

#### Requirements for storerooms and containers:

Keep only in the original container. Protect from heat and direct sunlight. Keep container dry. Keep container tightly closed in a cool, well-ventilated place. Storage temperatures not to exceed 86 °F. Do not re-use the empty container. Avoid release to the environment.

#### Hints on joint storage:

keep away from: acids, alkalis, metals, oxidizing agents  
Keep away from food, drink and animal feedingstuffs.

## 8. Exposure controls / personal protection

### Engineering controls

Provide good ventilation and/or an exhaust system in the work area.  
See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: Wear suitable protective clothing.  
Protective gloves according to OSHA Standard - 29 CFR: 1910.138.  
Glove material: Butyl caoutchouc (butyl rubber)  
Layer thickness: 0.7 mm  
Breakthrough time: 480 min  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: In case of inadequate ventilation wear respiratory protection. Respiratory protection must be worn whenever the TLV (WEL) levels have been exceeded. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

#### General hygiene considerations:

Avoid contact with skin and eyes. Work place should be equipped with a shower and an eye rinsing apparatus.  
Take off immediately all contaminated clothing and wash it before reuse.  
When using do not eat, drink or smoke. Wash hands before breaks and after work.



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## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|  |  |
|--|--|
| Appearance:                              | Form: pasty<br>Color: white  |
| Odor:                                    | characteristic   |
| Odor threshold:                          | not determined   |
| pH value:                                | not determined   |
| Melting point/freezing point:            | not determined   |
| Initial boiling point and boiling range: | not determined   |
| Flash point/flash point range:           | not applicable   |
| Evaporation rate:                        | not determined   |
| Flammability:                            | not determined   |
| Explosion limits:                        | LEL (Lower Explosion Limit): not determined<br>UEL (Upper Explosive Limit): not determined |
| Vapor pressure:                          | No data available  |
| Vapor density:                           | No data available  |
| Density:                                 | at 68 °F: 1.45 - 1.55 g/mL   |
| Water solubility:                        | insoluble  |
| Partition coefficient: n-octanol/water:  | not determined   |
| Auto-ignition temperature:               | not applicable   |
| Thermal decomposition:                   | No decomposition when used properly.   |
| Viscosity, dynamic:                      | not determined   |
| Explosive properties:                    | not determined   |
| Ignition temperature:                    | not determined   |

## 10. Stability and reactivity

|                                    |   |
|------------------------------------|---|
| Reactivity:                        | Corrosive to most metals.   |
| Chemical stability:                | Stable under recommended storage conditions.  |
| Possibility of hazardous reactions | Violent reaction with acids, alkalis, metals and oxidizing agents.                              |
| Conditions to avoid:               | Protect from heat and direct sunlight.<br>Keep away from heat sources, sparks and open flames.  |
| Incompatible materials:            | Acids, alkalis, oxidizing agents, metals.   |
| Hazardous decomposition products:  | Toxic gases/vapours.<br>nitrogen oxides (NO <sub>x</sub> ), carbon monoxide and carbon dioxide. |
| Thermal decomposition:             | No decomposition when used properly.  |



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## 11. Toxicological information

### Toxicological tests

Toxicological effects: The statements are derived from the properties of the single components. No toxicological data is available for the product as such.  
Acute toxicity (oral): Acute Toxicity - oral - Category 4 = Harmful if swallowed.  
ATEmix (calculated):  $300 < ATE \leq 2000$  mg/kg.  
Acute toxicity (dermal): Acute Toxicity - dermal - Category 4 = Harmful in contact with skin. (calculated):  $1000 < ATE \leq 2000$  mg/kg.  
Acute toxicity (inhalative): Lack of data.  
Skin corrosion/irritation, eye damage/irritation: Skin Corrosion - Category 1B = Causes severe skin burns and eye damage.  
Sensitisation to the respiratory tract: Lack of data.  
Skin sensitisation: Sensitization - skin - Category 1 = May cause an allergic skin reaction.  
Germ cell mutagenicity/Genotoxicity: Lack of data.  
Carcinogenicity: Lack of data.  
Reproductive toxicity: Lack of data.  
Effects on or via lactation: Lack of data.  
Specific target organ toxicity (single exposure): Lack of data.  
Specific target organ toxicity (repeated exposure): Specific Target Organ Toxicity (Repeated Exposure) - Category 2 = May cause damage to organs through prolonged or repeated exposure.  
Aspiration hazard: Lack of data.

Other information: Information about 4,4'-Methylenebis(cyclohexylamine):  
LD50, oral, Rat: 625 mg/kg bw  
LD50, dermal, Rabbit: 2110 mg/kg bw  
Information about Pentacthylenehexamine:  
LD50, oral, Rat: 1600 mg/kg

### Symptoms

Caustic effect on skin and mucous membranes. May cause sensitization by skin contact. Bloody lacrimation, Miosis and seizures. Danger of a allergic-anaphylactic shock. Gastrointestinal complaints.

## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: Toxic to aquatic life with long lasting effects.

### Mobility in soil

No data available

### Persistence and degradability

Further details: No data available

### Additional ecological information

Volatile organic compounds (VOC):

0 % by weight = 0 g/L

General information: Do not allow to penetrate into soil, waterbodies or drains. Do not allow uncontrolled discharge of product into the environment.



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### 13. Disposal considerations

#### Product

Recommendation: Dispose of as hazardous waste in compliance with local and national regulations.

#### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.

### 14. Transport information

#### USA: Department of Transportation (DOT)

Identification number: UN2735  
Proper shipping name: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.  
(4,4'-Methylenebis(cyclohexylamine)), mixture  
Hazard class or Division: 8  
Packing Group: II  
Labels: 8  
Symbols: G  
Special provisions: B2, IB2, T11, TP1, TP27  
Packaging – Exceptions: 154  
Packaging – Non-bulk: 202  
Packaging – Bulk: 242  
Quantity limitations – Passenger aircraft / rail: 1 L  
Quantity limitations – Cargo only: 30 L  
Vessel stowage – Location: A  
Vessel stowage – Other: 52



#### Sea transport (IMDG)

UN number: UN 2735  
Proper shipping name: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S.  
(4,4'-Methylenebis(cyclohexylamine)), mixture  
Class or division, Subsidiary risk: Class 8, Subrisk-II  
Packing Group: II  
EmS: F-A, S-B  
Special provisions: 274  
Limited quantities: 1 L  
Excepted quantities: E2  
Contaminated packaging - Instructions: P001  
Contaminated packaging - Provisions: -  
IBC - Instructions: IBC02  
IBC - Provisions: -  
Tank instructions - IMO: -  
Tank instructions - UN: T11  
Tank instructions - Provisions: TP1, TP27  
Stowage and handling: Category A.  
Segregation: SG35  
Properties and observations: Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. React violently with acids. Cause burns to skin, eyes and mucous membranes.  
Marine pollutant: yes  
Segregation group: 18



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### Air transport (IATA)

UN/ID number: UN 2735  
 Proper shipping name: UN 2735, AMINES, LIQUID, CORROSIVE, N.O.S. (4,4'-Methylenebis(cyclohexylamine)), mixture  
 Class or division, Subsidiary risk: Class 8  
 Packing Group: II  
 Hazard label: Corrosive  
 Excepted Quantity Code: E2  
 Passenger and Cargo Aircraft: Ltd.Qty.: Pack.Instr. Y840 - Max. Net Qty/Pkg. 0.5 L  
 Passenger and Cargo Aircraft: Pack.Instr. 851 - Max. Net Qty/Pkg. 1 L  
 Cargo Aircraft only: Pack.Instr. 855 - Max. Net Qty/Pkg. 30 L  
 Special provisions: A3 A803  
 Emergency Response Guide-Code (ERG): 8L

## 15. Regulatory information

### National regulations - U.S. Federal Regulations

4,4'-Methylenebis(cyclohexylamine): TSCA Inventory: listed  
 TSCA HPVC: not listed  
 Amines, polyethylenepoly-: TSCA Inventory: listed; UVCB; EPA flags XU  
 TSCA HPVC: not listed  
 Pentachthylenhexamine: TSCA Inventory: listed  
 TSCA HPVC: not listed

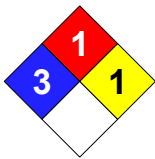
### National regulations - Great Britain

Hazchem-Code: 2X

## 16. Other information

Text for labeling: Contains 25 - 50 % 4,4'-Methylenebis(cyclohexylamine), 1 - 25 % Amines, polyethylenepoly-, 1 - 25 % Pentachthylenhexamine. Safety data sheet available on request.

Hazard rating systems:



NFPA Hazard Rating:

Health: 3 (Serious)  
 Fire: 1 (Slight)  
 Reactivity: 1 (Slight)

HMIS Version III Rating:

Health: 3 (Serious) - Chronic effects  
 Flammability: 1 (Slight)  
 Physical Hazard: 1 (Slight)

Personal Protection: X = Consult your supervisor

|                 |   |   |
|-----------------|---|---|
| HEALTH          | * | 3 |
| FLAMMABILITY    |   | 1 |
| PHYSICAL HAZARD |   | 1 |
|                 |   | X |

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### Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.