Resin Designs, LLC

# Safety Data Sheet
acc. to OSHA HCS

Printing date 06/26/2015 Reviewed on 06/10/2015

## 1 Identification

· **Product identifier**

· **Trade name:** ***Therobond 1600 Part B***

· **Article number:** Thero 1600 PT B

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Resin Designs, LLC
11 State Street
WOBURN, MA 01801
USA
epoznysz@resindesigns.com

· **Information department:** Product safety department
· **Emergency telephone number:** During normal opening times: +1 (781) 935-3133

## 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

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


Corrosive
Causes burns.


Harmful
Harmful in contact with skin and if swallowed.


Irritant
May cause sensitisation by skin contact.


Dangerous for the environment
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Information concerning particular hazards for human and environment:**
The product has to be labeled due to the calculation procedure of international guidelines.
· **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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· **Label elements**

· **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Code letter and hazard designation of product:**

Corrosive
Dangerous for the environment

· **Hazard-determining components of labeling:**
3,6,9-triazaundecamethylenediamine
3,6-diazaoctanethylenediamin

· **Risk phrases:**
Harmful in contact with skin and if swallowed.
Causes burns.
May cause sensitisation by skin contact.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**
Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

· **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:** | | |
|---|---|---|
| 112-57-2 | 3,6,9-triazaundecamethylenediamine | 50-100% |
| 112-24-3 | 3,6-diazaoctanethylenediamin | 2.5-10% |

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## 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:** No special measures required.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **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.
· **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.

## 7 Handling and storage

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

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· **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:** | |
|---|---|
| **112-57-2 3,6,9-triazaundecamethylenediamine** | |
| WEEL | Long-term value: 5 mg/m³<br>Skin; DSEN |
| **112-24-3 3,6-diazaoctanethylenediamin** | |
| WEEL | Long-term value: 6 mg/m³, 1 ppm<br>Skin |

· **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.

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· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

| | |
|---|---|
| · **Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | Fluid |
| **Color:** | According to product specification |
| · **Odor:** | Characteristic |
| · **Odour threshold:** | Not determined. |
| · **pH-value:** | Not determined. |
| · **Change in condition** | |
| **Melting point/Melting range:** | Undetermined. |
| **Boiling point/Boiling range:** | Undetermined. |
| · **Flash point:** | 160 °C (320 °F) |
| · **Flammability (solid, gaseous):** | Not applicable. |
| · **Ignition temperature:** | 335 °C (635 °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. |
| **Upper:** | Not determined. |
| · **Vapor pressure:** | Not determined. |
| · **Density at 20 °C (68 °F):** | 0.98 g/cm³ (8.178 lbs/gal) |
| · **Relative density** | Not determined. |
| · **Vapour 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:** | 0.0 % |
| · **Other information** | No further relevant information available. |



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## 10 Stability and reactivity

· **Reactivity**
· **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:** No dangerous decomposition products known.

## 11 Toxicological information

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

| · **LD/LC50 values that are relevant for classification:** | | |
|---|---|---|
| **112-57-2 3,6,9-triazaundecamethylenediamine** | | |
| Dermal | LD50 | 660 mg/kg (rabbit) |
| **112-24-3 3,6-diazaoctanethylenediamin** | | |
| Oral | LD50 | 2500 mg/kg (rat) |
| Dermal | LD50 | 805 mg/kg (rabbit) |

· **Primary irritant effect:**
· **on the skin:** Caustic effect on skin and mucous membranes.
· **on the eye:** Strong caustic effect.
· **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)** |
|---|
| 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.

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· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
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, ADN** | not regulated |
| · **IMDG, IATA** | UN2320 |
| · **UN proper shipping name** | |
| · **DOT, ADN** | not regulated |
| · **IMDG** | TETRAETHYLENEPENTAMINE, MARINE POLLUTANT |
| · **IATA** | TETRAETHYLENEPENTAMINE |
| · **Transport hazard class(es)** | |
| · **DOT, ADN** | |
| · **Class** | not regulated |
| · **IMDG** | |

| | |
|---|---|
| · **Class** | 8 Corrosive substances |
| · **IATA** | |
| · **Class** | 8 Corrosive substances |
| · **Packing group** | |
| · **DOT** | not regulated |
| · **IMDG, IATA** | III |
| · **Environmental hazards:** | |
| · **Marine pollutant:** | Yes<br>Symbol (fish and tree) |

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| | |
|---|---|
| · **Special precautions for user** | Not applicable. |
| · **EMS Number:** | F-A,S-B |
| · **Segregation groups** | Alkalis |
| · **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** | Not applicable. |

## 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 ingredients are 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.

· **Product related hazard informations:**
The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Corrosive
Dangerous for the environment

· **Hazard-determining components of labeling:**
3,6,9-triazaundecamethylenediamine
3,6-diazaoctanethylenediamin

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· **Risk phrases:**
Harmful in contact with skin and if swallowed.
Causes burns.
May cause sensitisation by skin contact.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Safety phrases:**
Keep locked up and out of the reach of children.
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.
Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
· **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.

· **Department issuing SDS:** Environment protection department.
· **Contact:** Mr. Edward Poznysz, VP of Technologies: epoznysz@resindesigns.com
· **Date of preparation / last revision** 06/26/2015 / -
· **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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1