1. Identification

Product name : Pulastic® GM 1500 Part B
Supplier : Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
USA
www.sikausa.com
Telephone : (201) 933-8800
Telefax : (201) 804-1076
E-mail address : ehs@sika-corp.com
Emergency telephone : CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use : For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Acute toxicity, Category 4 (Inhalation) : H332: Harmful if inhaled.
Skin irritation, Category 2 : H315: Causes skin irritation.
Eye irritation, Category 2B : H320: Causes eye irritation.
Respiratory sensitization, Category 1 : H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin sensitization, Category 1 : H317: May cause an allergic skin reaction.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system : H335: May cause respiratory irritation.
Specific target organ systemic toxicity - repeated exposure, Category 2 (Inhalation) : H373: May cause damage to organs through prolonged or repeated exposure if inhaled.

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H315 + H320 Causes skin and eye irritation.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing
difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.

Precautionary Statements:

Prevention:
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves.
P285 In case of inadequate ventilation wear respiratory protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P362 Take off contaminated clothing and wash before reuse.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-methylenebisphenyl diisocyanate</td>
<td>101-68-8</td>
<td>&gt;= 25 - &lt; 50 %</td>
</tr>
<tr>
<td>1,3-Butanediol, polymer with 1,1'-methylenebis[4-isocyanatobenzene], [(1-methyl-1,2-ethanediyl)bis(oxy)]bis[propanol] and 1,2-propan</td>
<td>70644-57-4</td>
<td>&gt;= 25 - &lt; 50 %</td>
</tr>
<tr>
<td>4,4'-Methylenebisphenyl diisocyanate, oligomers</td>
<td>25686-28-6</td>
<td>&gt;= 20 - &lt; 25 %</td>
</tr>
</tbody>
</table>
4. First aid measures

If inhaled: Move to fresh air. Consult a physician after significant exposure.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.

In case of eye contact: Remove contact lenses. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting without medical advice. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed: irritant effects sensitzing effects

Asthamatic appearance
Cough
Respiratory disorder
Allergic reactions
Headache
See Section 11 for more detailed information on health effects and symptoms.

Causes skin and eye irritation. May cause an allergic skin reaction. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure if inhaled.

Protection of first-aiders: Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.

Notes to physician: Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific extinguishing methods: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters: In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Deny access to unprotected persons.

Environmental precautions: Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. Handling and storage

Advice on safe handling: Avoid formation of aerosol. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8. Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Follow standard hygiene measures when handling chemical products.

Conditions for safe storage: Store in original container. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Store in accordance with local regulations.

Materials to avoid: No data available

8. Exposure controls/personal protection
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Basis **</th>
<th>Value</th>
<th>Exposure limit(s)* / Form of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-methylenediphenyl disocyanate</td>
<td>101-68-8</td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA Z-1</td>
<td>C</td>
<td>0.02 ppm 0.2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA P0</td>
<td>C</td>
<td>0.02 ppm 0.2 mg/m3</td>
</tr>
<tr>
<td>4,4’-Methylenediphenyl diisocyanate, oligomers</td>
<td>25686-28-6</td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td>OSHA P0</td>
<td>C</td>
<td>0.02 ppm 0.2 mg/m3</td>
</tr>
</tbody>
</table>

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

**Basis
ACGIH. Threshold Limit Values (TLV)
OSHA P0. Table Z-1, Limit for Air Contaminant (1989 Vacated Values)
OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant
OSHA P2. Permissible Exposure Limits (PEL), Table Z-2
OSHA Z3. Table Z-3, Mineral Dust

Engineering measures: Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection: Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Remarks: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
### 9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Color</td>
<td>various</td>
</tr>
<tr>
<td>Odor</td>
<td>mild musty</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 410 °F (&gt; 210 °C)</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit (Vol%)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit (Vol%)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Note: Not applicable</td>
</tr>
<tr>
<td>Melting point/range / Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.000 mmHg (0.0000245 hpa) at 68 °F (20 °C)</td>
</tr>
<tr>
<td>Density</td>
<td>ca.1.23 g/cm³ at 73 °F (23 °C)</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Note: slightly soluble</td>
</tr>
<tr>
<td>Partition coefficient: n-</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Safety Data Sheet

Pulastic® GM 1500 Part B

octanol/water
Viscosity, dynamic : No data available
Viscosity, kinematic : 370 mm²/s
             at 68 °F (20 °C)
Relative vapor density : No data available
Evaporation rate : No data available
Burning rate : No data available
Volatile organic compounds (VOC) content : 15 g/l
             A+B Combined

10. Stability and reactivity

Reactivity : No dangerous reaction known under conditions of normal use.
Chemical stability : The product is chemically stable.
Possibility of hazardous reactions : Stable under recommended storage conditions.
Conditions to avoid : No data available
Incompatible materials : No data available

11. Toxicological information

Acute toxicity
Harmful if inhaled.

Ingredients:
4,4’-methylenediphenyl diisocyanate:
Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
             Test atmosphere: dust/mist
             Method: Expert judgment

4,4’-Methylenediphenyl diisocyanate, oligomers:
Acute oral toxicity : LD50 Oral (Rat): > 5,000 mg/kg
Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l
             Test atmosphere: dust/mist
             Method: Expert judgment
Acute dermal toxicity : LD50 Dermal (Rabbit): > 9,400 mg/kg

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes eye irritation.
Respiratory or skin sensitization
Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity
Not classified based on available information.

Reproductive toxicity
Not classified based on available information.

STOT-single exposure
May cause respiratory irritation.

STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure if inhaled. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity
Not classified based on available information.

Carcinogenicity
Not classified based on available information.
IARC Not applicable
NTP Not applicable

12. Ecological information

Other information
Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

13. Disposal considerations

Disposal methods
Waste from residues: Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not dangerous goods

Special precautions for user
No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:
4,4'-methylenediphenyl diisocyanate 101-68-8 45.70%

Clean Air Act

Ozone-Depletion Potential
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):
4,4'-methylenediphenyl diisocyanate 101-68-8 45.70%
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65
This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

16. Other information

HMIS Classification

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>3</td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>X</td>
</tr>
</tbody>
</table>

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader
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Revision Date 06/19/2018

Material number: 443133