1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product name: PC 5686 ACTIVATOR

Company: Greenfield Polymers Ltd
Mylestone House
Sowerby New Road
West Yorkshire
HX6 1AA
United Kingdom
admin@greenfieldpolymers.com
www.greenfieldpolymers.com

Telephone: +44 (0) 1422 835 835
Fax: +44 (0) 1422 839 439
Emergency telephone number: +44 (0) 7769 590 629

2. HAZARDS IDENTIFICATION.

Main hazards: For their own protection, persons who suffer from hypersensitivity of the respiratory tract should avoid handling this product. Symptoms affecting the respiratory tract can also occur several hours after overexposure. Vapours and aerosols are the primary risk to the respiratory tract. Harmful by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitisation by inhalation and skin contact.

3. COMPOSITION / INFORMATION ON INGREDIENTS.

Hazardous ingredients:

<table>
<thead>
<tr>
<th>Conc.</th>
<th>CAS</th>
<th>EINECS</th>
<th>Symbols/Risk phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>diphenyl methane diisocyanate, isomers and homologues</td>
<td>90 - 100%</td>
<td>9016-87-9</td>
<td>Xn; R20-42/43 Xii; R36/37/38</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Skin contact: Irritating to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.

Eye contact: Irritating to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

Inhalation: Irritating to respiratory system. Inhalation may cause coughing, tightness of the chest and irritation of the respiratory system. Move the exposed person to fresh air. Seek medical attention.

Ingestion: Ingestion may cause nausea and vomiting. Seek medical attention if irritation or symptoms persist. DO NOT INDUCE VOMITING.

5. FIRE FIGHTING MEASURES

Extinguishing media: Carbon dioxide (CO2) Do not allow runoff water to enter sewers or drains.

Fire hazards: Burning produces irritating, toxic and obnoxious fumes.

Protective equipment: Wear suitable respiratory equipment when necessary. Self-contained breathing apparatus.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Ensure adequate ventilation of the working area. Wear suitable protective equipment.

Environmental precautions
Do not allow product to enter drains. Prevent further spillage if safe.

Clean up methods
Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

7. HANDLING AND STORAGE

Handling
Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and dispensing.

Storage
Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

<table>
<thead>
<tr>
<th>Substance</th>
<th>WEL 8-hr limit ppm:</th>
<th>WEL 8-hr limit mg/m³:</th>
<th>WEL 15 min limit ppm:</th>
<th>WEL 15 min limit mg/m³:</th>
</tr>
</thead>
<tbody>
<tr>
<td>diphenyl methane diisocyanate, isomers and homologues</td>
<td>0.02</td>
<td>0.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Engineering measures
Ensure adequate ventilation of the working area.

Respiratory protection
Wear: Suitable respiratory equipment.

Hand protection
Use chemical resistant gloves classified under standard EN374: protective gloves against chemicals and microorganisms. Examples of glove materials that might provide suitable protection include: butyl rubber, chlorinated polyethylene, polyethylene, polychloroprene (Neoprene), nitrile/butadiene rubber, polyvinyl chloride or fluoroeastomer (Viton).

When prolonged or frequently repeated contact may occur, a glove with protection class of 5 or higher (break through time > 240 min according to EN374) is recommended.

When only brief contact is expected, a glove with protection class of 3 or higher (break through time greater than 60 min according to EN374) is recommended. Contaminated gloves should be decontaminated and disposed of.

Notice: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: other chemicals that may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as instructions/specifications provided by the glove supplier.

Eye protection
Approved safety goggles.

Protective equipment
Wear chemical protective clothing.
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Liquid.</td>
</tr>
<tr>
<td>Colour</td>
<td>Brown.</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic.</td>
</tr>
<tr>
<td>pH</td>
<td>n/a</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt;300°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>229°C</td>
</tr>
<tr>
<td>Flammability limits</td>
<td>-</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>&lt;0.00001 mbar @25degC; 0.00016 mbar @50degC</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.23 g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>insoluble in water.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>ca. 100 mPa.s (DIN 53019)</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>&gt;500 degC (DIN 51794)</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Stability**

Stable under normal conditions.

### 11. TOXICLOGICAL INFORMATION

**Toxicological information**

- Diphenyl methane diisocyanate, isomers and homologues:
  - Oral Rat LD50 = >2000 mg/l
  - Dermal Rabbit LD50 = >2000 mg/l
  - Inhalation Rat LC50/4 h = 490 mg

**Acute toxicity**

May cause sensitisation by skin contact.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Reacts with water at the interface producing carbon dioxide and forming a solid and insoluble product with high melting point (polyurea). This reaction is accelerated by surfactants or by water-soluble solvents. Previous experience shows that polyurea is inert and non-degradable.

- Diphenyl methane diisocyanate, isomers and homologues:
  - Daphnia EC50/48h = >1000 mg/l mg/l
  - Brachydanio Rerio LC50/96h = >1000 mg/l
  - Algae IC50/72h = >100 mg/l mg/l

### 13. DISPOSAL CONSIDERATIONS

**General information**

Dispose of in compliance with all local and national regulations.

### 14. TRANSPORT INFORMATION

**Further information**

The product is not classified as dangerous for carriage.
15. REGULATORY INFORMATION

Labelling
The product is classified in accordance with 67/548/EEC.

Symbols
Xn - Harmful

Risk phrases
R20 - Harmful by inhalation.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R42/43 - May cause sensitisation by inhalation and skin contact.

Safety phrases
S22 - Do not breathe dust.
S23 - Do not breathe gas/fumes/vapour/spray.
S24 - Avoid contact with skin.
S37 - Wear suitable gloves.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S63 - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

16. OTHER INFORMATION

Text of risk phrases in Section 3.
R20 - Harmful by inhalation.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R42/43 - May cause sensitisation by inhalation and skin contact.

Further information
The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

Revision
This document differs from the previous version in the following areas:
9 - flammability limits.