SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Miracle Seal

Article number: MS 740103

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

Product Use [SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites;

[PC37] Water treatment chemicals;

Application of the substance / the preparation Domestic, Commercial, Industrial and Automotive Heating Systems.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:
C-Tec N.I Limited
Unit 6 Ashtree Enterprise Park,
Rathfriland Road, Newry, Co.Down,
N. Ireland, BT34 1BY.

Email: info@ct1ltd.com

Website: www.ct1ltd.com

Further information obtainable from:
Product safety department.
info@ct1ltd.com

1.4 Emergency telephone number:
Tel: +44(0)28 3083 4892 (Monday – Friday 9am - 5pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.1. Classification - EC 1272/2008

Repr. 1B: H360FD;

2.2. Label elements

Hazard pictograms

Signal Word Danger

Hazard Statement 1B: H360FD - May damage fertility. May damage the unborn child.

Precautionary Statement: Prevention

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary Statement: Response

P308+P313 - IF exposed or concerned: Get medical advice/attention.

Precautionary Statement: Storage

P405 - Store locked up.

Precautionary Statement: Disposal

P501 - Dispose of contents/container to a facility that complies with all local, state, region, national and international regulations.
SECTION 3: Composition/information on ingredients

3.2 Chemical characterization: Mixtures
67/548/EEC / 1999/45/EC

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Index No.</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>REACH Registration Number</th>
<th>Conc. (%w/w)</th>
<th>Classification</th>
<th>M-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono ethylene glycol (Ethane-1,2-diol particulate)</td>
<td>603-027-00-1</td>
<td>107-21-1</td>
<td>203-473-3</td>
<td>01-2119456816-28</td>
<td>20 - 30%</td>
<td>Xn; R22</td>
<td></td>
</tr>
<tr>
<td>disodium tetraborate decahydrate</td>
<td>005-011-01-1</td>
<td>1303-96-4</td>
<td>215-540-4</td>
<td></td>
<td>1 - 10%</td>
<td>Repr. Cat. 2; R60-61</td>
<td></td>
</tr>
</tbody>
</table>

EC 1272/2008

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<td>203-473-3</td>
<td>01-2119456816-28</td>
<td>20 - 30%</td>
<td>Acute Tox. 4: H302;</td>
<td></td>
</tr>
<tr>
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<td>005-011-01-1</td>
<td>1303-96-4</td>
<td>215-540-4</td>
<td></td>
<td>1 - 10%</td>
<td>Repr. 1B: H360FD;</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation May cause dizziness and headache. Move the exposed person to fresh air. Seek medical attention.

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

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

Ingestion Harmful if swallowed. May cause dizziness and headache. Ingestion may cause nausea and vomiting. Ingestion is irritant to the respiratory tract and may cause damage to the central nervous system. DO NOT INDUCE VOMITING. If swallowed, seek medical advice immediately and show this container or label.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Use as appropriate: Carbon dioxide (CO2), Dry chemical, Foam.

5.2. Special hazards arising from the substance or mixture
Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters
Self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation of the working area. Wear suitable protective equipment.

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

6.3. Methods and material for containment and cleaning up
Absorb with inert, absorbent material. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.

6.4. Reference to other sections
SECTION 8: Exposure controls/personal protection.
Miracle Seal

SECTION 7: Handling and storage

- 7.1. Precautions for safe handling
Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best manual handling considerations when handling, carrying and dispensing.
- 7.2. Conditions for safe storage, including any incompatibilities
Keep in a cool, dry, well ventilated area. Keep containers tightly closed.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters
- 8.1.1. Exposure Limit Values

<table>
<thead>
<tr>
<th></th>
<th>Mono ethylene glycol (Ethane-1,2-diol particulate)</th>
<th>Mono ethylene glycol (Ethane-1,2-diol vapour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL 8-hr limit ppm:</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>WEL 15 min limit ppm:</td>
<td>-</td>
<td>40</td>
</tr>
<tr>
<td>WEL 8-hr limit mg/m³ total</td>
<td>-</td>
<td>104</td>
</tr>
<tr>
<td></td>
<td>inhalable dust:</td>
<td>WEL 15 min limit mg/m³ total</td>
</tr>
<tr>
<td></td>
<td>respirable dust:</td>
<td>WEL 15 min limit mg/m³ total</td>
</tr>
</tbody>
</table>

- 8.2. Exposure controls
- 8.2.1. Appropriate engineering controls
Ensure adequate ventilation of the working area.
- 8.2.2. Individual protection measures
Wear chemical protective clothing.
  - Eye / face protection
  - Approved safety goggles.
  - Skin protection -
  - Hand protection
  - Chemical resistant gloves (PVC).
- Respiratory protection
  - Self-contained breathing apparatus. Wear protective clothing.

SECTION 9: Physical and chemical properties

- 9.1 Information on basic physical and chemical properties
- General Information
  - Appearance: Liquid
  - Colour: Brown
  - Odour: Mild
  - Odour threshold: No data available
  - pH: Not applicable.
  - Melting point: Not applicable.
  - Freezing Point: No data available
  - Initial boiling point: No data available

(Contd. on page 4)
Flash point Not applicable.
Evaporation rate No data available
Flammability (solid, gas) No data available
Vapour pressure No data available
Vapour density No data available
Relative density Not applicable.
Fat Solubility No data available
Partition coefficient No data available
Autoignition temperature No data available
Viscosity > 90 mPas (Cone & Plate)
Explosive properties No data available
Oxidising properties No data available
Solubility Not applicable.

9.2. Other information
Conductivity No data available
Surface tension No data available
Gas group No data available
Benzene Content No data available
Lead content No data available
VOC (Volatile organic compounds) No data available

SECTION 10: Stability and reactivity

10.1. Reactivity No precautions required to be mentioned.
10.2. Chemical stability Stable under normal conditions.
10.3. Possibility of hazardous reactions No data is available on this product.
10.4. Conditions to avoid Heat will increase pressure in sealed containers.
10.5. Incompatible materials Keep away from food, drink and animal feedingstuffs.
10.6. Hazardous decomposition products Burning produces irritating, toxic and obnoxious fumes.

SECTION 11: Toxicological information

11.1.4. Toxicological Information

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Oral Rat LD50</th>
<th>Dermal Rabbit LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium tetraborate decahydrate</td>
<td>6000mg/kg</td>
<td>&gt;2000mg/kg</td>
</tr>
<tr>
<td></td>
<td>Inhalation Rat LC50/4 h: &gt;2.0mg/l</td>
<td></td>
</tr>
<tr>
<td>Mono ethylene glycol</td>
<td>Oral Rat LD50: 4700mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Fish LC50/96h</th>
</tr>
</thead>
<tbody>
<tr>
<td>disodium tetraborate decahydrate</td>
<td>74.0000 mg/l</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability No data is available on this product.
12.3. Bioaccumulative potential
12.4. Mobility in soil No data is available on this product.
Miracle Seal

SECTION 13: Disposal considerations

General information
Dispose of in compliance with all local and national regulations.

Disposal methods
For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Disposal of packaging
Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14: Transport information

14.1 UN-Number  The product is not classified as dangerous for carriage.
14.2 UN proper shipping name  The product is not classified as dangerous for carriage.
14.3 Transport hazard class(es)  The product is not classified as dangerous for carriage.
14.4 Packing group  The product is not classified as dangerous for carriage.
14.5 Environmental hazards:  The product is not classified as dangerous for carriage.
14.6 Special precautions for user  The product is not classified as dangerous for carriage.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

SECTION 16: Other information

Revision This document differs from the previous version in the following areas:
1 - Product Use.
2 - Precautionary Statement: Disposal.
4 - Inhalation.
4 - Ingestion.
6 - 6.4. Reference to other sections.
10 - 10.4. Conditions to avoid.
10 - 10.3. Possibility of hazardous reactions.
10 - 10.6. Hazardous decomposition products.
10 - 10.1. Reactivity.
10 - 10.5. Incompatible materials.

(Contd. on page 6)
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.1</td>
<td>Toxicity</td>
</tr>
<tr>
<td>12.4</td>
<td>Mobility in soil</td>
</tr>
<tr>
<td>12.2</td>
<td>Persistence and degradability</td>
</tr>
<tr>
<td>13</td>
<td>Disposal methods</td>
</tr>
<tr>
<td>15.1</td>
<td>Safety, health and environmental regulations/legislation specific for the substance or mixture</td>
</tr>
</tbody>
</table>

**Text of risk phrases in Section 3**
- R22 - Harmful if swallowed.
- R60 - May impair fertility.
- R61 - May cause harm to the unborn child.

**Text of Hazard Statements in Section 3**
- Acute Tox. 4: H302 - Harmful if swallowed.
- Repr. 1B: H360FD - May damage fertility. May damage the unborn child.

**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.