SAFETY DATA SHEET
Version 1.1 Revision date 23/01/2013

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : HELIX

Product number : MD1-68/69

Company : Molecular Dimensions Limited
Unit 6 Goodwin Business Park
Willie Snaith Road
Newmarket
Suffolk
CB8 7SQ

Telephone : 01638 561051
Fax : 01638 782611
Email address : enquiries@moleculardimensions.com

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Flammable.
Toxic if swallowed. May cause cancer.
Irritating to eyes, respiratory system and skin. Corrosive.
Contact with combustible material may cause fire Harmful by inhalation.
Vapours may cause drowsiness and dizziness. May cause sensitisation.
Irritating to respiratory system. Risk of serious damage to eyes.
Possible risk of harm to the unborn child. Harmful to aquatic organisms.

Danger of serious damage to health by prolonged exposure.

Contact with acids liberates very toxic gas. Harmful to aquatic organisms.

3. COMPOSITION/INFORMATION ON INGREDIENTS.

<table>
<thead>
<tr>
<th>Reagent</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Reagent</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium sulphate</td>
<td>7783-20-2</td>
<td>231-984-1</td>
<td>PEG 400</td>
<td>26322-68-3</td>
<td>500-38-2</td>
</tr>
<tr>
<td>Barium chloride</td>
<td>10326-27-9</td>
<td>233-78-1</td>
<td>PEG 550 mme</td>
<td>9004-74-4</td>
<td>None</td>
</tr>
<tr>
<td>Bis Tris</td>
<td>6976-37-0</td>
<td>230-237-7</td>
<td>PEG 1000</td>
<td>25322-68-3</td>
<td>203-473-3</td>
</tr>
<tr>
<td>Calcium chloride dihydrate</td>
<td>10035-04-8</td>
<td>233-140-8</td>
<td>PEG 2000</td>
<td>25322-68-3</td>
<td>None</td>
</tr>
<tr>
<td>Glacial acetic acid</td>
<td>64-19-7</td>
<td>200-580-7</td>
<td>PEG 2000 mme</td>
<td>9004-74-4</td>
<td>None</td>
</tr>
<tr>
<td>Glycerol</td>
<td>56-81-8</td>
<td>200-289-5</td>
<td>PEG 3500</td>
<td>25322-68-3</td>
<td>203-473-3</td>
</tr>
<tr>
<td>Hexammine cobalt (III) chloride</td>
<td>10534-89-1</td>
<td>234-103-9</td>
<td>PEG 8000</td>
<td>25322-68-3</td>
<td>203-473-3</td>
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<tr>
<td>Hydrochloric acid, conc.</td>
<td>7647-01-0</td>
<td>231-595-7</td>
<td>PEG 20,000</td>
<td>25322-68-3</td>
<td>None</td>
</tr>
<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
<td>231-212-3</td>
<td>Potassium chloride</td>
<td>7447-40-7</td>
<td>None</td>
</tr>
<tr>
<td>Lithium sulphate monohydrate</td>
<td>10102-25-7</td>
<td>None</td>
<td>Sodium acetate</td>
<td>6131-90-4</td>
<td>204-823-8</td>
</tr>
<tr>
<td>Magnesium chloride hexahydrate</td>
<td>7791-18-6</td>
<td>232-094-6</td>
<td>Sodium chloride</td>
<td>03/04/6132</td>
<td>200-675-3</td>
</tr>
<tr>
<td>Magnesium sulfate</td>
<td>10034-99-8</td>
<td>None</td>
<td>Sodium citrate</td>
<td>7647-14-5</td>
<td>231-598-3</td>
</tr>
<tr>
<td>MES</td>
<td>145224-94-8</td>
<td>None</td>
<td>Sodium formate</td>
<td>141-53-7</td>
<td>205-488-0</td>
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<tr>
<td>MPD</td>
<td>107-41-5</td>
<td>203-489-0</td>
<td>Spermine</td>
<td>306-67-2</td>
<td>206-189-8</td>
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<tr>
<td>PEG 200</td>
<td>25322-68-3</td>
<td>500-038-2</td>
<td>Strontium chloride</td>
<td>10025-70-4</td>
<td>233-971-6</td>
</tr>
<tr>
<td>PEG 350 mme</td>
<td>9004-74-4</td>
<td>None</td>
<td>Sodium hydroxide 10M solution</td>
<td>1310-73-2</td>
<td>215-185-5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

If inhaled
Move person into fresh air. If breathing becomes difficult call a physician.

In case of skin contact
Immediately wash skin with soap and copious amounts of water.

In case of eye contact
Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
If swallowed
Wash out mouth with water provided the person is conscious. Call a physician.

5. FIRE-FIGHTING METHODS

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazard(s)
Emits toxic fumes when burnt.
Special protective equipment for fire-fighters
Wear self-contained breathing apparatus and protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Minimise direct contact with skin or eyes and prevent inhalation of dust.
Environmental precautions
Do not let product enter drains.
Methods for cleaning up
Sweep up and shovel. Keep in suitable, closed containers for disposal. Avoid raising dust. Ventilate area and wash spill site.

7. HANDLING AND STORAGE

Handling
Avoid inhalation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure.
Storage
Store in a cool place. Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Personal protective equipment
Respiratory protection
Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Hand protection
Wear protective gloves.
Eye protection
Safety glasses.
Hygiene measures
General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form liquid

Safety data
pH varying due to pack contents
Melting point varying due to pack contents
Boiling point varying due to pack contents
Flash point varying due to pack contents
Ignition temperature varying due to pack contents
Lower explosion limit varying due to pack contents
Upper explosion limit varying due to pack contents
Water solubility varying due to pack contents

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.
Materials to avoid
Strong oxidising agents.
Hazardous decomposition products
Formed under fire conditions - Carbon oxides, Nitrogen oxides.

11. TOXICOCLOGICAL INFORMATION
Acute toxicity
No data available.

Oxidation and corrosion
No data available.

Sensitisation
No data available.

Chronic exposure
No data available.

Potential health effects

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Harmful if inhaled. Can cause respiratory tract irritation.</td>
</tr>
<tr>
<td>Skin</td>
<td>Harmful if absorbed through skin. Can cause skin irritation.</td>
</tr>
<tr>
<td>Eyes</td>
<td>Can cause eye irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
No data available.

Ecotoxicity effects
No data available.

Further information on ecology
No data available.

13. DISPOSAL CONSIDERATIONS

Product
Observe all EU and local environmental regulations.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID
Not dangerous goods.

IMDG
Not dangerous goods.

IATA
Non-hazardous for air transport.

15. REGULATORY INFORMATION

Labelling according to EC Directives
Caution - substance not yet tested completely.

16. OTHER INFORMATION

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Molecular Dimensions Ltd., shall not be held liable for any damage resulting from handling or from contact with the above product.

For R&D use only. Not for drug, household or other uses.