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

Product name: PACT premier ECO Screen / PACT premier HT-96 ECO Screen
Product number: MD1-29-ECO / MD1-36-ECO
Company: Molecular Dimensions Limited
Unit 6 Goodwin Business Park
Willie Snaith Road
Newmarket
Suffolk
CB8 7SQ
Telephone: 01638 561051
Fax: 01638 660674
Email address: enquiries@moleculardimensions.com

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Flammable.
Toxic if swallowed.
Irritating to eyes, respiratory system and skin.
Causes severe burns.
Contact with combustible material may cause fire.
May cause cancer.
Irritating to eyes, respiratory system and skin.
Corrosive.
Causes severe burns.
Harmful to aquatic organisms.
May cause sensitisation.
Irritating to respiratory system.
Possible risk of harm to the unborn child.
Highly flammable.

2.1 IMMEDIATE 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.

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>
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<tbody>
<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
<td></td>
<td>Potassium sodium tartrate</td>
<td>6381-59-5</td>
<td>206-156-8</td>
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<tr>
<td>Ammonium chloride</td>
<td>9718</td>
<td>None</td>
<td>Potassium thiocyanate</td>
<td>333-20-0</td>
<td>206-370-1</td>
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<tr>
<td>Bis-Tris propane</td>
<td>64431-96-5</td>
<td>264-899-3</td>
<td>Sodium acetate trihydrate</td>
<td>127-09-3</td>
<td>204-823-8</td>
</tr>
<tr>
<td>Boric acid</td>
<td>10043-35-3</td>
<td>233-139-2</td>
<td>Sodium bromide</td>
<td>7758-02-3</td>
<td>231-830-3</td>
</tr>
<tr>
<td>Calcium chloride dihydrate</td>
<td>10035-04-8</td>
<td>233-140-8</td>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>231-598-3</td>
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<tr>
<td>Potassium phosphate dibasic</td>
<td>7758-11-4</td>
<td>231-834-5</td>
<td>Sodium citrate tribasic dihydrate</td>
<td>03/04/6132</td>
<td>200-675-3</td>
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<td>7558-79-4</td>
<td>231-448-7</td>
<td>Sodium phosphate monobasic monohydrate</td>
<td>10049-21-5</td>
<td>231-449-2</td>
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<tr>
<td>Glycine</td>
<td>56-40-6</td>
<td>200-272-2</td>
<td>Sodium fluoride</td>
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<td>230-907-9</td>
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<td>141-53-7</td>
<td>205-488-0</td>
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<tr>
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<td>231-595-7</td>
<td>Sodium hydroxide solution</td>
<td>1310-73-2</td>
<td>215-185-5</td>
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<tr>
<td>Imidazole</td>
<td>288-32-4</td>
<td>206-019-2</td>
<td>Sodium iodide</td>
<td>7681-82-5</td>
<td>231-679-3</td>
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<tr>
<td>Lithium chloride</td>
<td>7447-41-8</td>
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<td>None</td>
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<tr>
<td>Magnesium chloride hexahydrate</td>
<td>7791-18-6</td>
<td>232-094-6</td>
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<tr>
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<td>Sodium sulfate</td>
<td>7757-82-6</td>
<td>231-820-9</td>
</tr>
<tr>
<td>PEG 1500</td>
<td>25322-68-3</td>
<td>203-473-3</td>
<td>Succinic acid</td>
<td>110-15-6</td>
<td>203-740-4</td>
</tr>
<tr>
<td>PEG 3350</td>
<td>25322-68-3</td>
<td>None</td>
<td>Trizma® base (Tris)</td>
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<td>201-064-4</td>
</tr>
<tr>
<td>PEG 6000</td>
<td>25322-68-3</td>
<td>None</td>
<td>Zinc chloride</td>
<td>7646-85-7</td>
<td>231-592-0</td>
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<tr>
<td>Potassium phosphate monobasic</td>
<td>7778-77-0</td>
<td>231-913-4</td>
<td></td>
<td></td>
<td></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. TOXICOLOGICAL 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.
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name: JCSG plus ECO Screen / JCSG plus HT-96 ECO Screen
Product number: MD1-37-ECO / MD1-40-ECO
Company: Molecular Dimensions Limited
Unit 6 Goodwin Business Park
Withe Snaith Road
Newmarket
Suffolk
CB8 7SQ
Telephone: 01638 561051
Fax: 01638 660674
Email address: enquiries@moleculardimensions.com

2. HAZARDS IDENTIFICATION

Risk advice to man and the environment
Toxic if swallowed. Very toxic to aquatic organisms with long lasting effects.
Irritating to eyes, respiratory system and skin. May cause cancer.
Contact with combustible material may cause fire
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Vapours may cause drowsiness and dizziness. Fatal if inhaled.
May cause an allergic skin reaction.
May cause sensitisation.
May damage fertility or the unborn child.
Danger of serious damage to health by prolonged exposure.
Highly flammable liquid and vapour.
Contact with acids liberates very toxic gas.
May cause genetic defects.
May be corrosive to metals.

3. COMPOSITION/INFORMATION ON INGREDIENTS.

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<th>EC-No.</th>
<th>Reagent</th>
<th>CAS-No.</th>
<th>EC-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Propanediol</td>
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<td>200-338-0</td>
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<tr>
<td>Acetic acid</td>
<td>64-19-7</td>
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<td>PEG 1000</td>
<td>25322-68-3</td>
<td>500-038-2</td>
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<td>211-162-9</td>
<td>PEG 1000</td>
<td>25322-68-3</td>
<td>500-038-2</td>
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<td>500-038-2</td>
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<tr>
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<td>500-038-2</td>
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<tr>
<td>CAPS</td>
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<td>231-830-3</td>
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<tr>
<td>Lithium chloride</td>
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<td>231-212-3</td>
<td>Trimethylamine N-oxide dihydrate (TMAO)</td>
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<tr>
<td>Magnesium chloride hexahydrate</td>
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<td>Zinc acetate dihydrate</td>
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<td>208-170-2</td>
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<tr>
<td>Magnesium formate dihydroxy</td>
<td>6150-82-9</td>
<td>None</td>
<td>Magnesium sulphate heptahydrate</td>
<td>10034-99-8</td>
<td>None</td>
</tr>
</tbody>
</table>

Reagent: MES monohydrate
Sodium hydroxide
Sodium malonate dibasic monohydrate
Sodium phosphate dibasic dihydrate
Sodium phosphate monobasic monohydrate
Sodium thiocyanate
Succinic acid
 Trimethylamine N-oxide dihydrate (TMAO)
Tris
Zinc acetate dihydrate
Magnesium sulphate heptahydrate

2-Propanol
Acetic acid
Ammonium acetate
Ammonium chloride
Ammonium citrate dibasic
Ammonium formate
Ammonium nitrate
Ammonium phosphate dibasic
Ammonium phosphate monobasic
Ammonium sulfate
BICINE
Bis-Tris
Cadmium chloride hexahydrate
Calcium acetate hydrate
Calcium chloride dihydrate
CAPS
Cesium chloride
CHES
Citric acid
Cobalt(II) chloride hexahydrate
DL-Malic acid
Ethanol
Ethylene glycol
Glycerol
HEPES
HEPES sodium salt (Sodium HEPES)
Hexylene glycol (MPD)
Hydrochloric acid
Imidazole
Jefamine® M-600
Lithium chloride
Lithium sulfate
Magnesium chloride hexahydrate
Magnesium formate dihydroxy
Magnesium sulphate heptahydrate
MES monohydrate
Sodium hydroxide
Sodium malonate dibasic monohydrate
Sodium phosphate dibasic dihydrate
Sodium phosphate monobasic monohydrate
Sodium thiocyanate
Succinic acid
Trimethylamine N-oxide dihydrate (TMAO)
Tris
Zinc acetate dihydrate
Magnesium sulphate heptahydrate

SAFETY DATA SHEET
Version 2.0 Revision date 1/12/2014
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

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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. TOXICOLOGICAL INFORMATION

Acute toxicity
No data available.

Oxidation and corrosion
No data available.

Sensitisation
No data available.

Chronic exposure
No data available.

Potential health effects

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</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.

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