

# Material Safety Datasheet

## Envirogel (Orange Indicating Silica Gel)

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### Composition/Information on the components

|                               |   |
|-------------------------------|---|
| Chemical Description          | Orange to Green Indicating Silica Gel                                   |
| Formula                       | SiO <sub>2</sub>  |
| CAS (R Phrase Classification) | 112926-00-8 amorphous silica 98.2%, activated colouring agent 0.2% max. |

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### Health Hazard Identification

Do not breathe dust or exceed the exposure limits

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### First Aid Measures

|              |  |
|--------------|--|
| Inhalation   | Remove from source of exposure.  |
| Skin Contact | Wash spillage from skin with soap and water                                  |
| Eyes Contact | Wash immediately with copious amounts of water and obtain medical attention. |
| Ingestion    | Wash out mouth with water. If large amount swallowed or symptoms develop     |

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### Fire Fighting Measures

|                     |  |
|---------------------|--|
| Extinguishing Media | Not applicable. Inorganic compound. Not combustible. |
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### Accidental Release Measures

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|-----------------------|--|
| Personnel Precautions | Do not inhale. Wear appropriate protective clothing. Dust mask essential if conditions are dusty. See section 8 for exposure limits. |
| Spillages             | Contain spillage. Collect in suitable containers for recovery or disposal.<br>During collection avoid creating dust.                 |

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### Handling and Storage

|          |  |
|----------|--|
| Handling | Avoid creating any dust. Do not smoke. During handling electrostatic charges can accumulate (see BS 5958 for advice on the control of static.) |
| Storage  | All containers must be closed air tight and kept in a dry place  |

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### Exposure Control / Personal Protection

#### Occupational Exposure Standards:

|                            |  |
|----------------------------|--|
| Synthetic amorphous silica | Silica amorphous, total inhalable dust: UK EH40: OES 6mg/m <sup>3</sup> 8h TWA.<br>Silica amorphous, respirable dust: UK EH40: OES 2.4mg/m <sup>3</sup> 8h TWA.<br>Silica Gel: ACGIH: TLV 10mg/m <sup>3</sup> 8h TWA.<br>Activation agent: ACGIH: 0.5mg/m <sup>3</sup> 8h TWA. |
|----------------------------|--|

Engineering Control Measures      Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), and control of process conditions.

Respiratory Protection      Avoid inhalation of dust. Wear suitable respiratory protective equipment if working in confined spaces with inadequate ventilation or whenever there is any risk of the exposure limits being exceeded.

Hand Protection      Wear protective gloves.

Eyes Protection      Wear suitable eye protection.

Protection During Application      Handle in well ventilated conditions in accordance with good industrial hygiene and safety practices.

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### Physical and Chemical Properties

|                       |   |
|-----------------------|---|
| Aspect                | Beads   |
| Colour                | Dry: yellow/orange Saturated: Green                             |
| Odour                 | Odourless   |
| pH                    | 2-10 at 5% w/w in water   |
| Melting Point (°C)    | >1000   |
| Boiling Point         | Not Applicable  |
| Flash Point           | Not Applicable  |
| Explosion Limits      | Not Applicable  |
| Bulk Density          | 720kg per cu meter <b>(typical)</b>                             |
| Solubility in Water   | less 1.0% in weight   |
| Thermal Decomposition | Stable except when saturated water released during regeneration |

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### Stability and Reactivity

Stability  
Conditions to Avoid  
Materials to Avoid  
Hazardous Decomposition

Hygroscopic  
High temperatures in excess of 155°C  
None known  
Hygroscopic material

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### **Toxicological Information**

|                           |   |
|---------------------------|---|
| Toxicity                  | The lethal dose for humans for synthetic amorphous silica is estimated at over 15,000mg/kg.   |
| Health Effects Inhalation | Synthetic amorphous silica gel has little adverse effect on lungs and does not produce significant disease or toxic effect when exposure is kept below the permitted limits. However existing medical conditions (eg asthma, bronchitis) may be aggravated by exposure to dust. Effects of dust may be greater, and occur at lower levels of exposure in smokers compared to non-smokers. |
| Eye Contact               | Dust may cause discomfort and mild irritation.  |
| Skin Contact              | Dust may have a drying effect on the skin.  |
| Carcinogenicity           | Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).   |

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### **Ecological Information**

|             |   |
|-------------|---|
| Ecotoxicity | Synthetic amorphous silica is virtually inert and has no known adverse effect on the environment. |
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### **Disposal**

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|------------------|---|
| Product Disposal | Product can be reactivated in an oven for re-use.<br>This material is not classified as hazardous waste under EEC Directive 91/689/EEC.<br>Dispose of in accordance with all applicable local and national regulations.<br>This material is not classified as special waste under UK Special Waste Regulations 1996 and can be disposed of by landfill at an approved site. |
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### **Transport Information**

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| UN Class | Not classified as dangerous goods under the United Nations Transport Recommendations. |
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### **Information on Regulation**

EC Classification

S phrases

This product is not classified as dangerous.

Handle in accordance with good industrial hygiene and safety practices.

Avoid inhalation of dust.

EINECS Listing

Preparation – all components listed

TSCA Listing

Mixture – all components listed

AICS Listing

Mixture – all components listed

DSL/NDSL (Canadian) Listing

Mixture – all components listed

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### Other Information

MSDS first issued

18<sup>th</sup> April 2000

MSDS first revision

20<sup>th</sup> November 2002

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*The information provided in the Material Safety Data Sheet is correct to the best of our knowledge at the date of publication. This document is intended as a guide for safe handling, storage and use in known industrial applications.*

**Specification No.  
MCS/101/01/MSDS**

**MSDS According to EEC 91/155**