Dry & Dry

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MSDS FOR ORANGE SILICA GEL

1. Product Identification

Name: Orange Silica Gel

2. Composition/Information on the components

Chemical Description: Orange to Green Indicating Silica Gel
Formula: $SiO_2 + H_2O + C_{25}H_{30}ClN_3$
CAS (R Phrase Classification): 112926-00-8 amorphous silica 98.2%, activated colouring agent 0.2% max.

3. Health Hazard Identification

Do not breathe dust or exceed the exposure limits

4. 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

5. Fire Fighting Measures

Extinguishing Media: Not applicable. Inorganic compound. Not combustible.

6. Accidental Release Measures

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.
During collection avoid creating dust.

7. 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

8. Exposure Control / Personal Protection

Occupational Exposure Standards:
Synthetic amorphous silica
Silica amorphous, total inhalable dust: UK EH40: OES 6mg/m3 8h TWA.
Silica amorphous, respirable dust: UK EH40: OES 2.4mg/m3 8h TWA.
Silica Gel: ACGIH: TLV 10mg/m3 8h TWA.
Activation agent: ACGIH: 0.5mg/m3 8h TWA.

Engineering Control Measures
Engineering methods to prevent or control exposure are preferred.
Methods include process or personnel enclosure, mechanical ventilation (dilution and ocal 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.

9. 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 (oC): >1000
Boiling Point: Not Applicable
Flash Point: Not Applicable
Explosion Limits: Not Applicable
Bulk Density: 720kg per cu meter (typical)
Solubility in Water: less 1.0% in weight
Thermal Decomposition: Stable except when saturated water released during regeneration

10. Stability and Reactivity

Stability: Hygroscopic
Conditions to Avoid: High temperatures in excess of 155oC
Materials to Avoid: None known
Hazardous Decomposition: Hygroscopic material

11. 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).

12. Ecological Information

Ecotoxicity:
Synthetic amorphous silica is virtually inert and has no known adverse effect on the environment.

13. Disposal

Product Disposal:
Product can be reactivated in an oven for re-use.
This material is not classified as hazardous waste under EEC Directive 91/689/EEC.
Dispose of in accordance with all applicable local and national regulations.
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.

14. Transport Information

UN Class:
Not classified as dangerous goods under the United Nations Transport Recommendations.

15. Information on Regulation

EC Classification: This product is not classified as dangerous.
S phrases: 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

16. Other Information

MSDS first issued 18th April 2000
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