

1. Product Identification

Name of Product: Self indicating silica gel (Orange to Clear).
Molecular Weight: Not applicable.
Chemical Description: Synthetic amorphous silica impregnated with iron compound.
CAS No: 7631-86-9, 7783-83-7 & 7732-18-5.
EC No (EINECS): 231-545-4, 233-382-4 & 231-791-2.
Chemical Formula: SiO_2 , $(\text{NH}_4)\text{Fe}(\text{SO}_4)_2$ & H_2O .
Product Codes: See detail drawings.

2. Composition / Information on Ingredients

Ingredient	CAS No	EC No	Percent	Classification
Silica Gel (Silicon Dioxide)	7631-86-9	231-545-4	>93%	None
Ammonium Iron (III)	7783-83-7	233-382-4	<5%	None
Water	7732-18-5	231-791-2	<2%	None

3. Health Hazard Identification

The substance is very adsorbent and may have a drying effect on skin and eyes. Sensitisation of skin and respiratory system is possible.
Any dust could be a nuisance. The beaded product is considerably less dusty than the granular product and therefore the possibility of inhalation of dust with this is greatly reduced.
Evolves heat on contact with water.

4. First Aid Measures

Inhalation: Move outside to get some fresh air, keep warm and at rest. Obtain medical attention if symptoms develop.
Skin Contact: Wash with water, if skin irritation persists seek medical advice.
Eyes Contact: Flush with water, if irritation persists seek medical advice.
Ingestion: Provide water to drink, seek medical advice. Do not induce vomiting.

5. Fire Fighting Measures

Extinguishing Media: Products of combustion: Not combustible.
Not applicable, unused material will not burn. Use media appropriate for Surrounding fire

6. Accidental Release Measures

Personal Precautions: Respiratory protection if dusty, eye and hand protection.
Spillages: Sweep up or preferably vacuum up and collect in a suitable container for Recovery or disposal. Avoid raising dust, beaded material is slippery.

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 Controls / Personal Protection

Occupational Exposure Standards:

General:

Respiratory: Effective dust mask

Hand: Protective gloves

Eye: Goggles, safety glasses

Skins: Overalls

Exposure Limits: Amorphous silica

UK EH40: OES 8hr. TWA 6 mg/m³ total inhalable dustUK EH40: OES 8hr. TWA 2.4 mg/m³ respirable dustACGIH: TLV 8hr. TWA 10 mg/m³Ammonium Iron (III) Sulphate
(as FE)UK EH40: OES 8hr. TWA 1 mg/m³UK EH40: OES 8hr. TWA 2 mg/m³ACGIH: TLV 8hr. TWA 1 mg/m³

9. Physical and Chemical Properties

Appearance Orange granules/beads that turn colourless on adsorption of water.

Odour Odourless

pH 1.5- 5 at 5% w/w in water

Melting Point (°C) Not Applicable

Boiling Point Not Applicable

Flash Point Not Applicable

Explosion Limits Not Applicable

Bulk Density 700-750 kg per cu meter (**typical**)

Solubility in Water Insoluble in water and solvents

10. Stability and Reactivity

Stability Stable, Hygroscopic

Conditions to Avoid Evolves heat in contact with water

Hazardous decomposition Ammonia, oxides of sulphur, oxides of nitrogen

Products

11. Toxicological Information

Non-Toxicity:	Acute toxicity, Silica, amorphous – oral LD50>15,000 mg/kg, rat.
Effects of Exposure Inhalation:	Amorphous silica has little adverse effect on lungs and does not produce significant disease or toxic effect when exposure is kept below the permitted limits. Existing medical conditions (e.g. asthma, bronchitis) maybe aggravated by exposure to dust.
Eyes:	dust may cause irritation.
Skin:	Heat may be evolved when in contact with water. May have a drying effect.
Carcinogenicity:	Amorphous silica is not classified as carcinogenic to humans .

12. Ecological / Biological Information

Amorphous silica is chemically and biologically inert. It is not degradable. By its insolubility in water, there is a separation at every filtration and sedimentation process.

13. Disposal Considerations

Disposal according to national and local regulations.
This material is not classified as hazardous waste under the EEC Directive 91/689.
This material is not classified as special waste under the UK Special Waste regulations 1996 and can be disposed of by landfill at an approved site.

14. Transport Information

Not dangerous goods according to the transport regulations of UK Road, RID-ADR, IMO, MARPOL and ICAO
Not classified as dangerous goods under the United Nations Transport Regulations.
No special packaging requirements. Pack in airtight containers.

15. Information on Regulation

EC Classification	This product is not classified as dangerous.
S Phrases	Handle in accordance with good industrial hygiene and safety precautions. Avoid inhalation of dust.

16. Other Information

MSDS first issued 1st April 2008
MSDS revision 9th July 2015

As with any material, general industrial hygiene and housekeeping standards should be observed.

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.

Company

Address:

Email:

Website:

Telephone number:

Fax number:

Emergency Phone:

Brownell Ltd

Unit 2, Abbey Road Industrial Park,

Commercial Way, Park Royal,

London, NW10 7XF.

info@brownell.co.uk

www.brownell.co.uk

+44 (0) 20 8965 9281

+44 (0) 20 8965 3239

+44 (0) 20 8838 8408 - office hours only