

Safety Data Sheet

According to Regulation (EC) No 1907/2006 (REACH)

BROWNELL
L I M I T E D

Trade Name: Brownell Limited

Product No: Self-Indicating Silica Gel, Orange to Green

Version No: MCS/101/01/MSDS – 08 / EN

Revision Date: 25.10.2021

Print Date: 25.10.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name or designation of the mixture	Self-Indicating Silica Gel, Orange to Green
Registered number	-
Synonyms Issue	Silica, amorphous, silica, precipitated and gel
Date Version	25 th October 2021
Number Revision	08
Date Supersedes	30 th July 2018

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identifier uses	Desiccant. For adsorption of moisture and prevention of corrosion and mould growth.
Uses advised against	No other uses are advised.

1.3 Details of the supplier of the safety data sheet

Supplier Name	Brownell Limited
Address	Unit 2, Abbey Road Industrial Park Commercial Way Park Royal London NW10 7XF
Country	UK
Telephone	+44 (0) 208 965 9281
Fax	+44 (0) 208 965 3239
Email	info@brownell.co.uk
Contact	Neil Partridge
Website	www.brownell.co.uk

1.4 Emergency telephone number +44 (0) 208 965 9281 – (08:00 – 17:00) office hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

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Hazard summary

Physical hazards	Not classified as a physical hazard.
Human health hazards	Not classified as a health hazard.
Environmental hazards	Not classified as an environmental hazard.
Specific hazards	This product has the potential for generation of respirable dust during handling and use. For additional information on inhalation hazards, see Section 11 of this safety data sheet.
Main symptoms	Repeated exposure may cause skin dryness or cracking. Exposure to powder or dusts may be irritating to eyes, nose and throat.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Product identifier	Not applicable
Hazard statements	This substance does not meet the criteria for classification.
Precautionary statements	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Supplemental hazard information	Not applicable
Special rules for supplemental label elements for certain mixtures	Not applicable
Additional labeling	Not applicable

2.3 Other hazards Not known

SECTION 3: Composition/information on ingredients

3.1 Substance

Substance name	Silicon dioxide (98.2%)	Methyl Violet (0.3%)
Index No	-	-
EC No	231-545-4	208-953-6
REACH Registration No	01-2119379499-16-0080	-
CAS No	7631-86-9 (112926-00-8)	548-62-9

Purity	Not Applicable
Synonyms	Silica, amorphous, silica, precipitated and gel
Stabilisers	Not Applicable
Hazard Impurities	Not Applicable

3.2 Mixtures Not applicable

Additional information This mixture does not contain further substances fulfilling the criteria of hazard class “acute toxicity” according.

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SECTION 4: First Aid measures

General information

If exposed or concerned: get medical advice/attention. Show this safety data sheet to the doctor in attendance.

4.1 Description of first aid measures

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Skin contact

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Eye Contact

Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Ingestion

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

Dust may irritate the respiratory tract, skin and eyes.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General Fire Hazards

Not a fire hazard. No unusual fire or explosion hazards noted.

5.1 Extinguishing media

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Not applicable, inorganic compound, not combustible. No unusual fire or explosion hazards noted.

5.3 Advice for firefighters

Additional information

Wear self-contained breathing apparatus and protective clothing

SECTION 6: Accidental release measure

6.1 Personal precautions, protective equipment and emergency procedures.

For non-emergency personnel

Protective equipment

Use personal protective equipment to avoid inhalation of dust from the spilled material. Wear a dust mask, if dust is generated above exposure limits. Ensure adequate ventilation. Keep unnecessary personnel away.

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Emergency procedures Spills: Sweep up and containerise for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Regulations require reporting spills and releases to soil, water and air in excess of reportable quantities. Ensure adequate ventilation.

6.2 Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3 Methods and materials for containment and cleaning up

For containment Contain spillage, collect material using a vacuum cleaner equipped with HEPA filter and collect in suitable container for disposal.

For cleaning up Sweep up or vacuum up spillage to avoid the generation of dust during clean-up and collect in suitable container for disposal.

6.4 Reference of other sections

Additional information For personal protection, see section 8 of the SDS. For waste disposal, see section 13.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures

Advice on safe handling Wear appropriate personal protective equipment. Do not breathe dust from this material, avoid creating any dust and contact with skin and eyes as this may cause irritation.

Fire preventions During handling electrostatic charges can accumulate, therefore static electricity (see BS 5958 for advice on the control of static) and formation of sparks must be prevented, use proper bonding and/or grounding procedures.

Aerosol and dust generation preventions Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed.

Environment precautions No special environmental precautions required.

Advice on general occupational hygiene Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions Suitable for any general chemical storage area. Provide appropriate exhaust ventilation at places where dust is formed.

Packaging materials Keep all material in an air-tight container, material is hygroscopic.

Requirements for storage rooms and vessels All containers must be kept in a dry, cool place. Store in a well-ventilated place.

Hints on storage assembly:

Storage class Not Available

Materials to avoid Not Applicable

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7.3 Specific end uses

Recommendations

Not applicable

Specific end uses

The specified uses for this material are shown in section 1 of the document.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

8.1.1 Occupational exposure limits:

United Kingdom

Components	Type	Value	Form
General Dust	TWA	10 mg/m ³	Inhalable dust

UK. EH40 Workplace Exposure Limited (WELs)

Components	Type	Value	Form
Silicon dioxide (7631-86-9)	TWA	6 mg/m ³	Inhalable dust
		2.4 mg/m ³	Respirable dust
Methyl Violet (548-62-9)	TWA	0.5 mg/m ³	-

8.1.2 Biological limits values

No biological exposure limits noted for the ingredient(s).

8.1.3 Exposure limits at intended use

Not applicable

8.1.4 DNEL/PNEC-values

Substance name:

Self-Indicating Silica Gel, Orange to Green

DNEL

Not Available

PNEC

Not Available

8.1.5 Risk management measures according to used control banding approach

Not applicable

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust), control of process conditions and suitable respiratory protection must be worn, if OEL concentration levels are high.

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8.2.2 Personal protective equipment

Eye / Face protection:

Suitable eye protection Avoid contact with eyes. Wear safety glasses with side shields. (EN166).
Use tight fitting goggles, if dust is generated.

Skin protection:

Hand protection Protective gloves are recommended. (EN374) Use protective gloves made of: PVC or other plastic material gloves.

Body protection Normal work clothing (long sleeves shirts and long pants) is recommended. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Respirator type FFP2 or FFP3 (EN 149:2001) or dust mask.

Thermal hazards None Known

8.2.3 Environmental exposure controls

Consumer exposure control

Consumer use: Handle in accordance with good industrial hygiene and safety practices. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Do not breathe dust. Do not get this material in contact with eyes. Routinely wash work clothing and protective equipment to remove contaminants.

Service Life Not Known

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state: Solid **Form:** Beads **Dry:** Yellow/Orange **Saturated:** Green **Odour:** Odourless

	Value
pH	2-10 at 5% w/w in water
Melting Point/Freezing point	>1000
Boiling Point	Not determined
Flash Point	Data not available
Evaporation rate	Not applicable
Flammability (solid, gas)	No
Upper/lower flammability or explosive limits	
Upper explosive limits	Data not available
Lower explosive limits	Data not available

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Vapour pressure	Not relevant
Vapour density	Data not available
Relative density	Data not available
Solubility(ies)	Less 1.0% in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not available
Viscosity	Not applicable
Viscosity, dynamic	Data not available
Viscosity, cinematic	Date not available
Explosive properties	Not explosive
Oxidising properties	Not oxidising

9.2 Other information:

Physical hazards

Explosives:	Not explosive
Flammable gases:	Not applicable
Flammable aerosols:	Not applicable
Oxidising gases:	Not oxidising
Gases under pressure:	Not available
Flammable liquids:	Not applicable
Flammable solids:	Not applicable
Self-reactive substances and mixtures	Not available
Pyrophoric liquids	Not available
Pyrophoric solids	Not available
Self-heating substances and mixtures	Not available
Substances or mixtures which, in contact with water emit flammable gases	Not available
Oxidising liquids	Not available
Oxidising solids	Not available
Organic peroxides	Not available
Metal corrosion	Not available
Bulk Density	720kg/m ³ (typical)
Percent volatile	Not available

SECTION 10: Stability and reactivity

10.1 Reactivity Material is stable under normal conditions.

10.2 Chemical stability Hygroscopic. Material is stable under normal conditions.

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10.3 Possibility of hazardous Reactions	Hazardous polymerisation does not occur.
10.4 Conditions to avoid	Heat is evolved on contact with water. High temperatures in excess of 155°C. Avoid conditions which create dust. Contact with incompatible materials.
10.5 Incompatible materials	None known.
10.6 Hazardous decomposition Products	Hygroscopic material. No dangerous reaction known under conditions of normal use.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

11.1.1 Substances

Acute toxicity: Animal data

Not available

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 (e.g. 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.

Skin corrosion/irritation

Dust may have a drying effect on the skin.

Eye damage/irritation

Dust may cause discomfort and mild irritation.

Sensitisation to the respiratory tract/skin

Not classified. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Germ cell mutagenicity

Not available

Carcinogenicity

Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).

Reproductive toxicity

Not available

Specific target organ toxicity (single exposure)

Not available

Specific target organ toxicity (repeated exposure)

Not available

Aspiration hazard

Not available.

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Physical, chemical and toxicological characteristics

In case of ingestion

No data available

In case of skin contact

Dust may irritate the skin and cause a drying effect on the skin.

In case of inhalation

Dust may irritate respiratory system. Prolonged inhalation may be harmful. Synthetic amorphous silica gel has little adverse effect on lungs and does not produce significant toxic effects when exposure is kept below the permitted limits. However existing medical conditions (e.g. asthma, bronchitis) may be aggravated by exposure to dust and lower levels of exposure are less likely to affect smokers compared to non-smokers.

In case of eye contact

Dust may cause discomfort and mild irritation.

11.1.2 Mixtures

No data available

SECTION 12: Ecological information

12.1 Toxicity (Aquatic toxicity)

Synthetic amorphous silica is a virtually inert. Has no known adverse effect on the environment.

12.2 Persistence and degradability

The product solely consists of inorganic compounds which are not biodegradable. The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Does not bioaccumulate.

Environmental fate – Partition coefficient

Not applicable. (inorganic substance).

12.4 Mobility in soil

Insoluble and thus presents a low mobility in most soils.

12.5 Results of PBT and vPvB Assessment

Not applicable.

12.6 Other adverse effects

Based on available data, there is no evidence of significant toxicity of Synthetic Amorphous Silica to environmental organisms.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product / packaging disposal

Material should be recycled if possible.

Waste codes / waste designations according to EWC/AVV

Dispose of in accordance with all applicable local regulations.

Packaging

The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Where possible recycling is preferred to disposal or incineration.

Dispose of an unused product.

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Waste treatment options

Collect and reclaim or dispose in sealed containers at licenced waste disposal site. Dispose in accordance with all appliance regulations.

Other disposal recommendations

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.

SECTION 14: Transport information

14.1 UN No.

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

14.2 UN Proper Shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

Hazard label(s)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

No

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk

Not applicable.

according to Annex II of
MARPOL 73/78 and the IBC
Code

Land transport (ADR/RID)

Not regarded as dangerous goods

Inland Waterway transport
(ADN)

Not regarded as dangerous goods

Sea transport (IMDG)

Not regarded as dangerous goods

Air transport (ICAO-TI / IATA-
DGR)

Not regarded as dangerous goods

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.2 National regulations

Follow national regulation for work with chemical agents.

15.2 Chemical safety assessment

Chemical Safety Assessment has been carried out.

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Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

This product is in compliance with Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronics equipment (RoHS).

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.

15.1.2 National regulations

Follow national regulation for work with chemical agents.

15.2 Chemical safety assessment

Chemical Safety Assessment has been carried out.

SECTION 16: Other information

16.1 Indication of changes

MSDS first issued	5 th October 2000
MSDS 1 st revision	20 th November 2008
MSDS 2 nd revision	12 th October 2011
MSDS 3 rd revision	4 th March 2014
MSDS 4 th revision	1 st May 2015
MSDS 5 th revision	21 st February 2017
MSDS 6 th revision	30 th July 2018

16.2 Abbreviations and acronyms

Silica, amorphous, silica, precipitated and gel

16.3 Key literature references and sources for data

ECHA European Chemicals agency

16.4 Classification for mixtures & used evaluation method according to regulation (EC) 1207/2008 [CLP]

Please refer to section 2.1.

16.5 Relevant R-, H- and EUH-phrases (number and full text)

Not applicable

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16.6 Training advice

Not Available

16.7 Further information

Not available.

Disclaimer

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