

SAFETY DATA SHEET

SUL4

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

1.1. Product identifier

Product name SUL4

Product number S132

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

Identified uses Fertilisers.

1.3. Details of the supplier of the safety data sheet

1.4. Emergency telephone number

Emergency telephone T: 01270 502891 (English-language only response)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Warning

Hazard statements H315 Causes skin irritation.

Precautionary statements P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

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Dust may form explosive mixture with air. Take precautionary measures against static discharges.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

SULPHUR	> 90%
CAS number: 7704-34-9	EC number: 231-722-6

Classification

Skin Irrit. 2 - H315

BENTONITE	< 10%
CAS number: 1302-78-9	EC number: 215-108-5

Classification

Not Classified

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Get medical attention if any discomfort continues. Try to induce vomiting. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse with water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. Do not use eye wash containing boric acid.

4.2. Most important symptoms and effects, both acute and delayed

General information	For further information, please refer to section 11.
Inhalation	Burning sensation in mouth. Coughing. Sore throat.
Ingestion	Burning sensation in mouth. Diarrhoea.
Skin contact	Redness.
Eye contact	Redness. Pain. Visual disturbances, including blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire. Water spray, fog or mist. Carbon dioxide or dry powder. Extinguish with dry sand.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

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5.2. Special hazards arising from the substance or mixture

Specific hazards	Dust may form explosive mixture with air.
Hazardous combustion products	Sulphur dioxide. Sulphurous gases (SO _x). Hydrogen sulphide (H ₂ S).

5.3. Advice for firefighters

Protective actions during firefighting	Contain and collect extinguishing water. Cool containers exposed to flames with water until well after the fire is out.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Avoid generation and spreading of dust. No smoking, sparks, flames or other sources of ignition near spillage.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. If risk of water pollution occurs, notify appropriate authorities.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Avoid generation and spreading of dust. Dampen spillage with water. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Collect and dispose of spillage as indicated in Section 13.
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6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. Collect and dispose of spillage as indicated in Section 13.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Avoid spilling. Avoid contact with skin and eyes. Avoid handling which leads to dust formation. Provide adequate ventilation. Use personal protective equipment as required. Static electricity and formation of sparks must be prevented. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Keep away from heat, sparks and open flame.
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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from sunlight. May be corrosive to metals when wet.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

SULPHUR

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No exposure limits known for ingredient(s).

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of dust. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection

Wear tight-fitting, dust-resistant, chemical splash goggles if airborne dust is generated. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

Other skin and body protection

Provide eyewash station and safety shower. Wear appropriate clothing to prevent reasonably probable skin contact.

Hygiene measures

Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

Respiratory protection

No specific requirements are anticipated under normal conditions of use. (Pellets. Prills.) In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter (type P2). Particulate filters should comply with European Standard EN143. Disposable filtering half mask respirators should comply with European Standard EN149 or EN405.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Solid Pellets. Prills.
Colour	Light (or pale). Green. / White.
Odour	Odourless.
Odour threshold	Not applicable.
pH	pH (concentrated solution): Neutral when dry.
Melting point	113°C (Sulphur.)
Initial boiling point and range	444°C @ 101.3 kPa (Sulphur.)
Flash point	218°C EU A9. (Sulphur.)
Evaporation rate	Not applicable.
Flammability (solid, gas)	The product is not flammable.

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Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 1400 g/m ³ (dust) Lower flammable/explosive limit: 35 g/m ³ (Sulphur.)
Vapour pressure	< 0.0001 Pa @ 20°C (Sulphur.)
Relative density	2.07 kg/m ³ @ 20°C (Sulphur.)
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	232°C (Sulphur.)
Decomposition Temperature	No information available.
Viscosity	Not applicable.
Explosive properties	Not considered to be explosive. (Sulphur.) Dust may form explosive mixture with air.
Oxidising properties	There are no chemical groups present in the product that are associated with oxidising properties.

9.2. Other information

Other information Not available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity May be corrosive to metals when wet. The following materials may react with the product: Alkaline earths. Alkalis.

10.2. Chemical stability

Stability SUL4 fertiliser will physically break down when exposed to water/moisture.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Reactions with the following materials may cause explosions: Chlorates. Nitrates. Oxidising materials. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition. Water, moisture. Avoid exposure to high temperatures or direct sunlight. Avoid generation and spreading of dust.

10.5. Incompatible materials

Materials to avoid Chlorates. Nitrates. Oxidising materials. Avoid contact with alkalis. Alkaline earths.

10.6. Hazardous decomposition products

Hazardous decomposition products Sulphurous gases (SO_x). Hydrogen sulphide (H₂S).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

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Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Does not contain any substances known to be mutagenic. Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Does not contain any substances known to be carcinogenic. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction. Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

General information :

Inhalation Dust in high concentrations may irritate the respiratory system.

Ingestion May cause discomfort if swallowed.

Skin contact Causes skin irritation.

Eye contact Particles in the eyes may cause irritation and smarting.

Toxicological information on ingredients.

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Toxicological effects REACH dossier information.

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat . Based on available data the classification criteria are not met.

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit . Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ (4h) > 5.43 g/m³, Inhalation, Rat . Based on available data the classification criteria are not met.

Skin corrosion/irritation

Animal data Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation - Guinea pig: Not sensitising. Based on available data the classification criteria are not met.

Germ cell mutagenicity

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Genotoxicity - in vitro Chromosome aberration: Negative. Based on available data the classification criteria are not met.

Genotoxicity - in vivo Chromosome aberration: Negative. Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Data lacking.

IARC carcinogenicity Not listed.

Reproductive toxicity

Reproductive toxicity - development Data lacking.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL (90d) 1000 mg/kg/day, Oral, Rat . Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

General information :

Inhalation Dust may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Irritating to skin.

Eye contact Particles in the eyes may cause irritation and smarting.

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment.

Ecological information on ingredients.

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Ecotoxicity Not regarded as dangerous for the environment.

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met.

Ecological information on ingredients.

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Toxicity REACH dossier information. Based on available data the classification criteria are not met.

Acute toxicity - fish NOEC, 96 hours: > 5 µg/l, Brachydanio rerio (Zebra Fish)
Not toxic at limit of water solubility.

Acute toxicity - aquatic invertebrates NOEC, 48 hours: > 5 µg/l, Daphnia magna
Not toxic at limit of water solubility.

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12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product. The product contains only inorganic substances which are not biodegradable.

Ecological information on ingredients.

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Persistence and degradability Not applicable. Substance is inorganic.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not applicable.

Ecological information on ingredients.

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Bioaccumulative potential Not applicable.

12.4. Mobility in soil

Mobility Not known.

Ecological information on ingredients.

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Mobility The product has poor water-solubility.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

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Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

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Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

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General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID). Special provision 242 - "UN 1350, SUL4" does not apply when the product takes a specialised form (prills, granules, pastilles, pellets or flakes).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information

The following information is provided to conform with article 13 of the EC Directive on Packaging and Packaging Waste 94/62/EC:

- Wherever possible we use returnable packaging and pallets. Details of these are on our Sales Contracts
- For any non-returnable packaging the cost of disposal is at your expense, but we do have a list of reprocessors available
- In most cases, but not all, we are able to supply products in returnable packaging but the additional cost of this will be for the customer's expense. Please ask for details with your specific requirements
- Any products supplied in returnable packaging is clearly marked to this effect.

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Key literature references and sources for data	Supplier's information. European Chemicals Agency, http://echa.europa.eu/ - REACH disseminated dossier. International Chemical Safety Card, www.inchem.org .
Classification procedures according to Regulation (EC) 1272/2008	Skin Irrit. 2 - H315: Calculation method.
Revision date	15/08/2016
Revision	2
Supersedes date	31/07/2014
Hazard statements in full	H315 Causes skin irritation.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.