SAFETY DATA SHEET

fluoro**chem.**

| 1. Identification of Substance / Mixture | | |
|--|---|--|
| Product Identifier | | |
| 1.1.2 Product Name | MARMESIN | |
| 1.1.2 Other Names | | |
| 1.1.1 Product Code | F818192 | |
| 1.1.3 CAS | 13849-08-6 | |
| 1.1.4 MDL | | |
| 1.1.5 EINECS | N/A | |
| 1.1.6 REACH Registration Number | | |
| 1.2.1 Relevant Uses | For research and development purposes only. | |
| 1.2.2 Uses Advised Against | No uses advised against. | |
| 1.3 Supplier Details | | |
| 1.3.1 Company | Fluorochem Ltd | |
| 1.3.2 Address | Unit 14, Graphite Way Hadfield Glossop Derbys. SK13 1QH United Kingdom | |
| 1.3.3 Telephone | 01457 860111 | |
| 1.3.4 Email | sds@fluorochem.co.uk | |
| 1.4.1 Emergency Telephone | +44 20 3807 3798 | |
| 2. Hazards Identification | | |
| 2.1.1 Classification | | |
| | Acute Tox. 4 Skin Sens. 1 | |
| 2.2.1 Signal Word | Warning | |
| 2.2.2 Pictograms | GHS07 | |
| 2.2.3 Hazards | H302 Harmful if swallowed. H317 May cause an allergic skin reaction. | |
| 2.2.4 Precautions | P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace. P280.4 Wear protective gloves/protective clothing and eye/face protection. P301+P312.2 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P321 Specific treatment. P330 Rinse mouth. P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. | |

2.2.5 Other Classification Hazards

3. Composition of Ingredients

| SUBSTANCE | | | | |
|----------------------------------|-------------------|---|---|---|
| 3.1.1 Name 3. | 1.2 CAS | Einecs | 3.1.3 Composition | Hazards |
| MARMESIN 1 | 3849-08-6 | N/A | | H302 Acute Tox. 4 H317 Skin Sens. 1 |
| 4. First Aid Measures | | | | |
| 4.1.1 Eye contact | | ct uninjured eye. Remove contact | ediately with plenty of flowing water for lenses, if present and easy to do. Con | 10 to 15 minutes holding eyelids apart. tinue rinsing and seek medical |
| 4.1.2 Ingestion | | allowed rinse the mouth with plent cian if you feel unwell. | y of water (only if the person is conscio | ous) and contact a poison centre or |
| 4.1.3 Inhalation | | ove person to fresh air and keep o hing is irregular or stopped, admir | o 1 | centre or physician if you feel unwell. If |
| 4.1.4 Skin Contact | | After contact with skin, wash immediately with plenty of water and soap. Remove contaminated clothing immediately. In case of skin reactions, consult a physician. | | |
| 4.1.5 General Advice | No ad | dditional advice. | | |
| 4.2.1 Most Important Symptoms a | and Effects No kr | nown symptoms or effects. | | |
| 4.3.1 Immediate First Aid Measur | es Nosp | pecial immediate treatment require | ed | |

5. Fire Fighting Measures

| 5.1.1 Suitable Fire Extinguishing Media | Carbon dioxide, alcohol resistant foam or dry chemical powder. Use water to extinguish fire. |
|---|--|
| 5.1.2 Unsuitable Fire Extinguishing Media | No known unsuitable media. |
| 5.2.1 Special Hazards | Thermal decomposition can lead to release of irritating gases and vapours. |
| 5.3.1 Advice for Fire Fighters | As in any fire, wear self-contained breathing apparatus and full protective gear. |
| | |

6. Accidental Release Measures

| 6.1.1 Personal Precautions | Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Keep personnel away from spill/leak. |
|---|--|
| 6.2.1 Environmental Precautions | Prevent further leakage if safe to do so. Prevent product from entering drains. Do not let product enter waterways or sewer systems. Discharge into the environment must be avoided. |
| 6.3.1 Containment - Methods and Materials | Absorb the spilled material with an inert absorbent (e.g. sand, silica gel, rag, vermiculite) before transferring into an airtight container. Remove all sources of ignition. Dispose of appropriately according to local regulations. |
| 6.4.1 Referenced SDS Sections | For personal protection see section 8. For disposal see section 13. |
| 7. Handling and Storage | |

Personal Precautions

| 7.1.1 Safe Handling | Wear appropriate personal protective equipment. Use only under a chemical fume hood. Keep away from heat/ sparks/open flame/hot surfaces. Take measures to prevent the build-up of electrostatic charge. Ensure adequate exhaust ventilation, especially if dust, aerosol or fumes will be generated. Avoid contact with skin, eyes and clothing. For precautions see section 2.2. |
|---|---|
| 7.1.2 Protection Against Explosion and Fire | Where possible, use anti static and spark proof equipment when handling. |
| 7.1.3 General Occupational Hygiene | Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. |

Conditions for Safe Storage and Incompatabilities

| 7.2.1 Managing Storage Risks | Keep container tightly closed and upright. Store in a cool, dry and well-ventilated place. |
|------------------------------|--|
| 7.2.2 Storage Controls | Keep container tightly closed in a cool area away from sunlight or heat sources. |
| 7.2.3 Maintaining Integrity | Keep container tightly closed in a cool area away from sunlight or heat sources. |
| 7.2.4 Other Advice | No other specific advice available. |
| 7.3.1 Specific End Use(s) | No specific end uses are advised. The products supplied are for research purposes only. |

8. Exposure Controls / Personal Protection

8.1.1 Control Parameters

8.2.1 Engineering Measures

Use only under a chemical fume hood ensuring adequate ventilation, especially in confined areas. Use explosionproof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

| 8.2.2 Face Protection | Wear tightly fitting safety goggles which adhere to European standard EN 166. Ensure eye bath is to hand. |
|-------------------------------------|--|
| 8.2.3 Hand Protection | Handle with impermeable gloves. Inspect gloves before use. Gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. |
| 8.2.4 Skin Protection | Wear appropriate protective clothing ensuring all skin is covered. Wear safety shoes that meet at least S1 standards. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. |
| 8.2.5 Respiratory Protection | Product should be handled in a fume cupboard with adequate extraction. No respiratory equipment is needed under normal use conditions. |
| 8.2.6 Hygiene Protection | Ensure hair or skin particles cannot enter the chemical container. |
| 8.2.7 Environment Exposure Controls | Avoid discharge into the environment, see section 6.2. |

9. Physical and Chemical Properties

| 9.1.1 State | No data available. |
|--|--------------------------------------|
| 9.1.2 Appearance | No data available. |
| 9.1.3 Odour | No data available. |
| 9.1.4 Odour Threshold | No data available. |
| 9.1.5 pH | No data available. |
| 9.1.6 Melting Point / Freezing Point | No data available. |
| 9.1.7 Initial Boiling Point | No data available. |
| 9.1.8 Boiling Range | No data available. |
| 9.1.9 Flash Point | No data available. |
| 9.1.10 Evaporation Rate | No data available. |
| 9.1.11 Flammability | No data available. |
| 9.1.12 Upper / Lower Flammability or Explosion Limits | No data available. |
| 9.1.13 Vapour Pressure | No data available. |
| 9.1.14 Vapour Density | No data available. |
| 9.1.15 Relative Density | No data available. |
| 9.1.16 Solubility | |
| 9.1.17 Partition Coefficient | No data available. |
| 9.1.18 Auto Ignition Temperature | No data available. |
| 9.1.19 Decomposition Temperature | No data available. |
| 9.1.20 Viscosity | No data available. |
| 9.1.21 Explosive Properties | No data available. |
| 9.1.22 Oxidising Properties | No data available. |
| 9.2.1 Other information | No additional information available. |
| | |

10. Stability and Reactivity

| 10.1.1 Reactivity |
|---|
| 10.2.1 Stability |
| 10.3.1 Possibility of Hazardous Reactions |
| 10.4.1 Conditions To Avoid |
| 10.5.1 Incompatible Materials |
| 10.6.1 Hazardous Decomposition Products |

No known Reactivity, based on information available. Stable under recommended storage conditions. None under normal storage conditions. Heat, sparks, open flames, sources of ignition. Exposure to moisture. Strong oxidising agents. No Data Available.

11. Toxicology Information

11.1.1 Acute Toxicity 11.1.2 Skin Corrosion / Irritation 11.1.3 Serious Eye Damage / Irritation 11.1.4 Respiratory or Skin Sensitisation 11.1.5 Germ Cell Mutagenicity 11.1.6 Carcinogenicity 11.1.7 Reproductive Toxicity 11.1.8 STOT-single Exposure No Toxicology data available for this product. No Toxicology data available for this product. No Toxicology data available for this product. May cause an allergic skin reaction. No Toxicology data available for this product. No Toxicology data available for this product.

No Toxicology data available for this product. No Toxicology data available for this product.

| No toxicology data available for this product. |
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| No Toxicology data available for this product. |
| No Toxicology data available for this product. |
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| No Ecological data available for this product. |
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| No Ecological data available for this product. |
| No Ecological data available for this product. |
| No Ecological data available for this product. |
| No Ecological data available for this product. |
| No Ecological data available for this product. |
| |

13. Disposal Considerations

11.1.9 STOT-repeated Exposure

 13.1.1 Disposal Operations
 Ensure product is disposed of by licensed waste carriers.

 13.1.2 Disposal of Packaging
 Ensure INNER PACKAGING is disposed of by licensed waste carriers.

Ensure INNER PACKAGING is disposed of by licensed waste carriers. Some OUTER PACKAGING MAY be recyclable if not contaminated.

14. Transport Information

IATA UN Number 14.1.2 IATA Proper Shipping Name IATA Packing Group 14.1.4 IATA Hazard Class 14.1.5 IATA Sub Class ADR UN Number Non Hazardous For ADR Proper Shipping Transport (MARMESIN) Name

ADR Packing Group ADR Hazard Class ADR Sub Class

No Toxicology data available for this product

Non Hazardous For Transport (MARMESIN) IMDG UN Number

IMDG Proper Shipping Name

IMDG Packing Group IMDG Hazard Class

IMDG Sub Class

Non Hazardous For Transport (MARMESIN)

15. Regulatory Information

 15.1.1 Regulatory Information
 As far as Fluorochem is aware, there are no further regulations controlling this product.

 15.2.1 Chemical Safety
 No Chemical Safety Assessment is available for this product.

 Assessment
 No Chemical Safety Assessment is available for this product.

16. Other Information

| 16.1.2 Information Not Covered in Other Sections | ADR: Accord Europeen sur le transport des merchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road) RID:Reglement International concernant le transport des merchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association ICAO:International Civil Aviation Organization ICAO-TI: Technical Instructions by the ICAO GHS: Globally Harmonized System of Classification and Labelling of Chemicals CAS:Chemical Abstracts Service |
|---|--|
| Revision | 1 |
| Date Modified | Oct 16, 2023 3:17:00 PM |
| 16.1.1 Disclaimer | The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance |

with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user. This SDS adheres to Regulation (EC) No 1907/2006, and as of 13th April 2023, also conforms to EU Regulation 2020/878.