

1: Identification of substance / mixture

1. Product Identifier

Substance

Product Name **PMSF**
Product Code P20270
CAS Number 329-98-6
Other Names Phenylmethylsulfonyl fluoride

IUPAC

MFCD Number

EC/EINECS

REACH Number

Index-No

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

Research and Development

3. Details of the supplier of the safety data sheet

Melford Laboratories Ltd
Bildeston Road, Chelsworth
Ipswich
Suffolk
IP77LE
UK

Telephone: 01449 741178
Fax: 01449 741217
Email: support@melford.co.uk



4. Emergency telephone number

+44(0)1449 741178 -

2. Hazards Identification

1. Classification of the substance or mixture

H301	Acute Tox. 3	
H314	Skin Corr. 1A	
H318	Eye Dam. 1	

2. Label elements

Signal Word **Danger**



Hazard Statements

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary Phrases

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Strong hydrogen fluoride-releaser

3. Composition / Information on Ingredients

1. Substances

Product Name	Hazards	Concentration
PMSF		
CAS Number: 329-98-6	H301, H314, H318 Acute Tox. 3, Eye Dam. 1, Skin Corr. 1A	<=100%

4. First Aid Measures

1. Description of first aid measures

Skin Contact P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a doctor.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.

Eye Contact P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Take victim immediately to hospital. Continue rinsing eyes during transport to hospital.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness
First treatment with calcium gluconate paste.

Ingestion P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.
Take victim immediately to hospital.

Inhalation P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Move to fresh air in case of accidental inhalation.
If breathing becomes bubbly or difficult, have the casualty sit and provide oxygen if available.
If unconscious, check for breathing and apply artificial respiration if necessary.
If unconscious and breathing is OK, place in the recovery position.
Consult a doctor.

2. Most important symptoms and effects

The most important known symptoms and effects are described in section 11

3. Indication of any immediate medical attention

Show this safety data sheet to the doctor in attendance.
Hydrofluoric (HF) acid burns require immediate and specialized first aid and medical treatment. Symptoms may be delayed up to 24 hours depending on the concentration of HF. After decontamination with water, further damage can occur due to penetration/absorption of the fluoride ion. Treatment should be directed toward binding the fluoride ion as well as the effects of exposure. Skin exposures can be treated with a 2.5% calcium gluconate ge

5. Firefighting measures

1. Extinguishing Media

Suitable Water spray.
Alcohol resistant foam.
Dry chemical powder.
Carbon dioxide.

Unsuitable No data available.

2. Special Hazards arising from the substance or mixture

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.

3. Advice for Fire Fighters

Wear self-contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

1. Personal Precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust/vapours.
For personal protection see section 8.

2. Environmental Precautions

Do not discharge into drains or rivers.
Prevent further leakage or spillage if safe to do so.

3. Methods & Materials

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete.

4. Preventing the occurrence of secondary hazards.

Clean up all spills immediately. Wear suitable PPE.

7. Handling and Storage

1. Personal Precautions

Safe Handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.

Protection against explosions and fires Normal measures for preventive fire protection.

2. Conditions for safe storage, including any incompatibilities

Managing Storage Risks Store in cool, well ventilated area.
Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials.
Moisture sensitive

Storage Controls No special requirements

Maintaining Integrity Keep container tightly closed.

Other advice no further information available

3. Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. Exposure Controls/Personal Protection

1. Control Parameters

No Data Available

2. Exposure Controls

<i>General protective and hygiene measures</i>	P280: Wear protective gloves/protective clothing/eye protection/face protection. The standard precautionary measures should be adhered to when handling Avoid contact with skin and eyes Wash hands during breaks and at the end of handling the material
<i>Engineering measures</i>	Ensure there is exhaust ventilation of the area. Ensure laboratory is equipped with a safety shower and eye wash station.
<i>Eye / Face Protection</i>	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
<i>Hand protection</i>	Handle with gloves. Gloves must be inspected prior to use. 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. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it
<i>Respiratory protection</i>	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
<i>Skin protection</i>	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<i>Other personal protection advice</i>	No data available

9. Physical and Chemical Properties

1. Physical and Chemical Properties

Appearance	Solid
Odour	No Data Available
Odour threshold	No Data Available
PH	No Data Available
Melting point / Freezing point	91-94°C
Initial boiling point and boiling range	No Data Available
Flash point	No Data Available
Evaporation rate	No Data Available
Flammability(solid,gas)	No Data Available
Upper/lower flammability or explosive limits	No Data Available
Vapour pressure	No Data Available
Vapour density	No Data Available
Relative density	No Data Available
Solubility(ies):	No Data Available
Partition coefficient: n-octanol/water	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive properties	No Data Available
Oxidising properties	No Data Available

2. Other Information

None

10. Stability and Reactivity

1. Reactivity

No data available

2. Stability

Stable under recommended storage conditions.

3. Possibility of Hazardous Reactions

No data available

4. Conditions to Avoid

Water hydrolyzes material liberating acidic gas which in contact with metal surfaces can generate flammable and/or explosive hydrogen gas.
Reacts dangerously with glass

5. Incompatible Materials

Strong bases.
Strong oxidizing agents.
Acids.

6. Hazardous Decomposition Products

In combustion emits toxic fumes of carbon dioxide / carbon monoxide.
In combustion emits toxic fumes of hydrogen fluoride.
In combustion emits toxic fumes of sulphur oxides.

11. Toxicology information

1. Information

<i>Acute Toxicity</i>	LD50 Oral-Mouse-200 mg/kg
<i>Skin corrosion/irritation</i>	No data available
<i>Serious eye Damage/irritation</i>	No data available
<i>Respiratory or skin sensitisation</i>	No data available
<i>Germ Cell mutagenicity</i>	No data available
<i>Carcinogenicity</i>	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<i>Reproductive toxicity</i>	No data available
<i>STOT-single exposure</i>	No data available
<i>STOT-repeated exposure</i>	No data available
<i>Aspiration hazard</i>	No data available

2. Additional

RTECS: XT8040000
Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Liver-Irregularities-Based on Human Evidence

12. Ecological Information

1. Toxicity

No data available

2. Persistence and degradability

No data available

3. Bio-Accumulative Potential

No data available

4. Mobility and Soil

No data available

5. Results of PBT & vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

6. Other adverse effects

No data available

13. Disposal Considerations

1. Waste Treatment Methods

Disposal Operations Hand over to authorised disposal company as hazardous waste.

Disposal of Packaging Disposal must be made according to official regulations.
Dispose of as unused product.

14. Transport Information

Air (ICAO)

1. **UN Number:** 2928
2. **Shipping Name:** Toxic solid, corrosive, organic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 8



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Road (ADR)

1. **UN Number:** 2928
2. **Shipping Name:** TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S (PMSF).
3. **Transport hazard class(es):** : 6 Sub Class :



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**
7. **Transport in bulk:**

Sea (IMDG)

1. **UN Number:** 2928
2. **Shipping Name:** Toxic solid, corrosive, organic, n.o.s.
3. **Transport hazard class(es):** : 6.1 Sub Class : 8



4. **Packing group:** II
5. **Environmental hazards:**
6. **Special Precautions for user:**

7. Transport in bulk: IBCINS: IBC06
IBCPPOV: B21

TANKPROV: TP33

15. Safety, health, environmental and national regulations

1. Safety, health, environmental and national regulations:

product is not subject to any additional regulations or provisions

2. Safety Assessment

No Chemical Safety Assessment

16. Other Information

1. Other Information:

This safety data sheet complies to the requirements of Regulation (EC) No. 1907/2006

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)

RID:Reglement International concernant le transport des marchandises 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

3. 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.

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