



Environmental Health & Safety

Owner C.H.O	DOC. NO. SOP	REV. 2	DATE 12/9/2019
DOC. TITLE SOP FOR PHENYLMETHANESULFONYL FLUORIDE			

STANDARD OPERATING PROCEDURES (SOP) FOR WORKING WITH PHENYLMETHANESULFONYL FLUORIDE (PMSF) AT AMHERST COLLEGE

General Information

Phenylmethanesulfonyl Fluoride (PMSF) is a white crystalline compound, often used in solution, as a protease inhibitor in the Laboratory. It is an acutely hazardous compound that is characterized by high toxicity and high corrosiveness. **Upon exposure to water, PMSF forms Hydrofluoric Acid**, which is extremely toxic and corrosive. As a result, it is recommended that personnel also review the SOP for Hydrofluoric Acid before working with this compound

Personal Protective Equipment

When working with PMSF, the following personal protective equipment (PPE) **must** be worn:

Splash goggles

Lab coat

Long pants

Close toed shoes

Nitrile Gloves (double-gloving is recommended; change as often as needed. Change gloves immediately upon contact)

Safety Devices

Fume hood – always work with PMSF in a fume hood to prevent exposure by inhalation

Identify the location of all the safety devices in the room before starting your procedure. Also, familiarize yourself with all the possible means of egress

Specific Health Hazards

PMSF may cause severe skin burns and serious eye damage. It is very toxic if swallowed



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Pictogram:

Hazards: Toxic, Corrosive

Routes of Entry

Inhalation, skin/eye contact, ingestion

If *any part of your body* comes in contact with PMSF, call the Amherst College Emergency phone number 413-542-2111. Also call this number if you begin to feel ill after working with or in the vicinity of PMSF

Inhalation

If inhaled, move to fresh air, and get help. if you begin to feel ill during / after working with PMSF, Call the Amherst College Police Department (ACDP) at x2111 to report it

Eye contact

Use eyewash to flush eyes with water for at least 15 minutes

Skin Contact

Wash skin with plenty of water for 15 minutes. Use safety shower, if needed.

If in solution with water, Wash skin with plenty of water for 5 minutes (Use safety shower, if needed), then apply enough 2.5% calcium gluconate (usually kept close to work station) to cover the entire area. DO NOT USE CALCIUM CHLORIDE!

(see SOP for Hydrofluoric Acid for more information)

Ingestion

Do not induce vomiting

Rinse with plenty of water

Drink plenty of water

Storage and Special Handling

Store in a tightly closed container in a cool, dry area that is well ventilated, such as a vented chemical cabinet



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Store in a secondary container with a lid

Label containers with the words: "Danger" and "Acutely Toxic, Corrosive"

Do not store on shelf

Do not store in glass containers as PMSF may corrode glass containers

Store away from: oxidizers, sources of ignition, heat, water, strong bases, strong acids

If you have PMSF that you no longer need, please contact Jason Williams, x2736, for disposal

Special Handling

Upon exposure with water, PMSF forms hydrofluoric acid and hydrogen fluoride gas in contact with water (both compounds are very toxic and corrosive)

Spill clean up

Please do not attempt to clean up a PMSF spill as this is an acutely hazardous compound

Contact Jason Williams (x2736) or call the emergency phone number, x2111 to report any spills of this compound

Alert everyone in the area

Leave the room

Close the door behind you

Call Jason Williams (Chemical Hygiene Officer) or The Amherst College emergency number (x2111) to report it.

Disposal

Waste containing PMSF should not be mixed with other types of waste, if possible

Disposable pipets, pipet tips, and any other disposal devices that come in contact with PMSF must be disposed of as hazardous waste

If you have PMSF that you no longer need, contact the Chemical Hygiene officer

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Questions

Contact Jason Williams or Environmental Health and Safety if you have any questions about this SOP or this compound.

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