



# Cell Signaling

TECHNOLOGY®

**SAFETY DATA SHEET (SDS):** According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

**Issuing Date:** 2014-01-30

**Revision Date:** 2014-01-30

**Version:** 1

## SECTION 1. Identification

### Product identifier

**Product No.** 8553  
**Product name** PMSF  
**Packaging size** 34.84 mg  
**UN number** UN2928  
**Description** Phenylmethanesulfonyl Fluoride (PMSF) is an inhibitor of serine proteases such as trypsin, chymotrypsin, thrombin, and papain. It is routinely added as a supplement to lysis buffers just prior to lysis, to prevent protease degradation.  
**Other means of identification** 8553M, 8553S.

### Recommended use of the chemical and restrictions on use

**Identified uses** This product is intended for research purposes only.  
**Uses advised against** This product is not intended for use in diagnostic procedures or therapeutics.  
This product is not intended for use in humans or animals.

### Manufacturer, importer, supplier

**Manufacturer address** Cell Signaling Technology, Inc.  
3 Trask Lane  
Danvers, MA 01923  
TEL: +1 978 867 2300  
FAX: +1 978 867 2400  
**Website** www.cellsignal.com  
**Email address** support@cellsignal.com  
**Company phone number** 978-867-2300  
**Emergency telephone number** In case of emergency call CHEMTREC 1-800-424-9300

## SECTION 2. Hazard(s) identification

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<b>Acute toxicity - Oral</b>	Category 3
<b>Skin corrosion/irritation</b>	Category 1

### GHS Label elements, including precautionary statements

**Signal Word**

Danger

**Hazard statement(s)**

Toxic if swallowed

Causes severe skin burns and eye damage

**Precautionary Statement(s)**

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Supplementary Hazard Information****Hazards not otherwise classified (HNOC)** Contact with water liberates toxic gas**SECTION 3. Composition/information on ingredients**

<b>Formula</b>	C <sub>7</sub> H <sub>7</sub> FO <sub>2</sub> S
<b>Chemical nature</b>	Organic compound.
<b>Common name</b>	Phenylmethylsulfonyl fluoride
<b>Synonyms</b>	PMSF, Benzenemethanesulfonyl fluoride, Benzylsulfonyl fluoride, Phenylmethylsulfonyl fluoride.

Chemical Name	CAS No.	Weight %
alpha-toluenesulphonyl fluoride	329-98-6	100

**SECTION 4. First-aid measures**

<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
<b>Skin contact</b>	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Inhalation</b>	Immediate medical attention is required. Move to fresh air. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Drink plenty of water. Rinse mouth.

**Most important symptoms and effects, both acute and delayed**

No information or data specific to the product on this toxicological (health) effect is available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician** Treat symptomatically.

**Advice for emergency responders**

**General advice** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Protection of First-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**SECTION 5. Fire-fighting measures****Extinguishing media**

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

Water hydrolyzes material liberating acidic gas. Contact with metals may evolve flammable hydrogen gas.

**Explosion Data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** Ensure adequate ventilation. Use personal protective equipment. Avoid contact with the skin and the eyes. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

**Other information** DO NOT GET WATER on spilled substance or inside containers.

**Environmental precautions**

Do not flush into surface water or sanitary sewer system. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use personal protective equipment. Clean contaminated surface thoroughly. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation.

**SECTION 7. Handling and storage****Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

<b>Technical measures/Storage conditions</b>	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat.
<b>Packaging material</b>	No information available.
<b>Incompatible products</b>	Strong oxidizing agents, Bases, Water.

**SECTION 8. Exposure controls/personal protection****Control parameters**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Appropriate engineering controls**

Showers, eyewash stations, and ventilation systems.

**Individual protection measures, such as personal protective equipment**

<b>Eye/face protection</b>	Safety glasses with side-shields. If splashes are likely to occur, wear: Tightly fitting safety goggles.
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
<b>Hygiene measures</b>	When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

**SECTION 9. Physical and chemical properties****Information on basic physical and chemical properties**

<b>Physical state</b>	Solid
<b>Appearance</b>	Crystalline powder
<b>Odor</b>	No information available
<b>Color</b>	White to off-white, light yellow
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point</b>	92 °C
<b>Initial boiling point and boiling range</b>	No information available
<b>Flash point</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Upper flammability limit</b>	No information available
<b>Lower flammability limit</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Relative density</b>	No information available
<b>Solubility</b>	No information available
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient: n-octanol/water</b>	No information available

<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular Weight</b>	174.1943
<b>VOC content</b>	No information available
<b>Viscosity</b>	No information available
<b>Density</b>	No information available

## SECTION 10. Stability and reactivity

### Reactivity

No information available.

### Chemical stability

Reacts with water.

### Possibility of hazardous reactions

<b>Hazardous reactions</b>	Reacts with water to produce toxic and corrosive gas.
<b>Hazardous polymerization</b>	None under normal processing.

### Conditions to Avoid

Incompatible products. Extremes of temperature and direct sunlight.

### Incompatible Materials

Strong oxidizing agents, Bases, Water.

### Hazardous Decomposition Products

Carbon oxides, Sulfur oxides, Hydrogen fluoride.

## SECTION 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Contact with moist mucous membranes of the respiratory system can cause caustic condition resulting in burns.
<b>Eye contact</b>	May cause irreversible damage to eyes.
<b>Skin contact</b>	Contact with moist skin may cause skin burns.
<b>Ingestion</b>	Ingestion causes burns of the upper digestive and respiratory tract. Toxic if swallowed.

### Information on toxicological effects

Product is toxic by ingestion. This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
alpha-toluenesulphonyl fluoride 329-98-6	200 (mg/kg) (mice)	-	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Symptoms</b>	Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.
<b>Corrosivity</b>	This product is corrosive to living tissue.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenicity</b>	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	No information available.
<b>Developmental Toxicity</b>	No information available.
<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Neurological effects</b>	No information available.
<b>Aspiration Hazard</b>	No information available.
<b>Endocrine Disruptor Information</b>	No information available.

## SECTION 12. Ecological information

### Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	No information available.
<b>Mobility</b>	No information available

### Other adverse effects

No information available.

## SECTION 13. Disposal considerations

### Waste Disposal Methods

Should not be released into the environment.

### Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

## SECTION 14. Transport information

### DOT

<b>UN number</b>	UN2928
<b>Transport hazard class(es)</b>	6.1
<b>Subsidiary Class</b>	8
<b>Packing Group</b>	II
<b>Description</b>	UN2928, Toxic solid, corrosive, organic, n.o.s (alpha-Toluenesulfonyl fluoride), 6.1 (8), II,

**Emergency Response Guide Number** 154

**IATA**

**UN number** UN2928  
**Transport hazard class(es)** 6.1  
**Subsidiary hazard class** 8  
**Packing Group** II  
**ERG Code** 6C  
**Special precautions for user** A5  
**Description** UN2928, Toxic solid, corrosive, organic, n.o.s (alpha-Toluenesulfonyl fluoride), 6.1 (8), II

**IMDG/IMO**

**UN number** UN2928  
**Transport hazard class(es)** 6.1  
**Subsidiary hazard class** 8  
**Packing group** II  
**EmS No.** F-A, S-B  
**Description** UN2928, Toxic solid, corrosive, organic, n.o.s (alpha-Toluenesulfonyl fluoride), 6.1 (8), II

<b>SECTION 15. Regulatory information</b>
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**All of the components in the product are on the following inventory lists:**

<b>TSCA</b>	Complies
<b>DSL</b>	Complies
<b>NDSL</b>	Complies

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	Yes

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
alpha-toluenesulphonyl fluoride 329-98-6	Not Listed	Not Listed	Not Listed

**U.S. EPA Label Information**

This product does not contain any substances regulated as pesticides.

**SECTION 16. Other information**

**Issuing Date:** 2014-01-30

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**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of Safety Data Sheet