

Section 1: Identification

Product Name Azathioprine USP
Commercial Name Azanin, Imuran, Imurel, Muran
Product Use Not available.
Restrictions On Use Not available.

Product Code 30-2258

Company PCCA
 9901 South Wilcrest
 Houston, TX 77099
 Phone: 1-800-331-2498
 Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Acute toxicity, oral Category 4 Sensitization, skin Category 1 Germ cell mutagenicity Category 1
CFR 1910.1200 Carcinogenicity Category 1 Reproductive toxicity Category 1 Specific target organ toxicity, repeated exposure Category 1 (bone marrow)

Signal Word DANGER

Hazard Statement(s) Harmful if swallowed. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Harmful in contact with skin. May cause cancer. May cause an allergic skin reaction. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace.

Response If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. If exposed or concerned: Get medical advice/attention.

Storage Store locked up

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Azathioprine USP
% By Weight 100
CAS# 446-86-6
Molecular Weight 277.26 g/mole
Chemical Formula C₉H₇N₇O₂S
Synonym(s) 1H-Purine,6-((1-methyl-4-nitro-1H-imidazol-5-yl)thio)-; 6-((1-Methyl-4-nitro-1H-imidazol-5-yl)thio)-1H-purine; 6-((1-Methyl-4-nitroimidazol-5-yl)thio)purine; 6-(1-Methyl-4-nitroimidazol-5-ylthio)purine; 6-(1-Methyl-p-nitro-5-imidazolyl)-thiopurine; 6-(Methyl-p-nitro-5-imidazolyl)-thiopurine; 6-(1'-Methyl-4'-nitro-5'-imidazolyl)-mercaptapurine

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Azathioprine USP	446-86-6	100	N/A	N/A

Section 4: First-Aid Measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. For minor skin contact, avoid spreading material on unaffected skin. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash clothing separately before reuse.
Eye Contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Symptoms/Effects	
Acute	Bone marrow suppression. Potent pharmacologically active material. Occupational exposure to small amounts may cause physiological effects.
Delayed	Bone marrow suppression. Potent pharmacologically active material. Occupational exposure to small amounts may cause physiological effects.

Immediate Medical Attention

Provide general supportive measures and treat symptomatically.

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

Water. Foam. Dry chemical or CO₂. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media

Not available.

Products of Combustion

No unusual fire or explosion hazards noted.

Firefighters Special Equipment and Precautions

Wear suitable protective equipment. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing. Use water spray to cool unopened containers. Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away. Wear appropriate personal protective equipment. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS. Methods and materials for containment and cleaning up: Avoid the generation of dusts during clean-up. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Environmental precautions: Avoid release to the environment.

Section 7: Handling and Storage

Handling: As a general rule, when handling USP materials, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly. Select and use containment devices and personal protective equipment based on a risk assessment of material potency and exposure potential. Storage: Store in tight container. This material should be handled and stored per label instructions to ensure product integrity.

Section 8: Exposure Controls/Personal Protection

Exposure Limits	The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits. TWA 3 micrograms/m ³
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Engineering Controls

No open handling. For laboratory operations, use approved ventilation or containment system (biological safety cabinet, ventilated balance enclosure, glovebox). Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred.

Personal Protection

Eye/face protection: Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available. **Skin protection** **Hand protection:** Consider double gloves. Wear nitrile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. **Other:** Train employees in proper gowning and degowning practices. Wear disposable lab coat, disposable sleeve covers and two pair of gloves as appropriate for the task. Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. **Respiratory protection:** Use a powered air-purifying respirator (PAPR) with HEPA filters, disposable outerware and head cover for spill cleanup. Choose respiratory protection appropriate to the task and the level of existing engineering controls. **Thermal hazards:** Wear appropriate thermal protective clothing, when necessary. **General hygiene considerations:** Pharmacological effects may be seen with occupational exposure. Handling practices in this SDS are recommendations for laboratory use of USP materials.

Section 9: Physical and Chemical Properties

Appearance	Light Yellow. Powder. Clumpy. Solid.		
Odor	Odorless.		
Odor Threshold	Not available.		
Melting Point	460.4 - 471.2 °F (238 - 244 °)	pH	Not available.
Freezing Point	Not available.	Vapor Pressure	< 0.0000001 kPa (77 °F (25 °C))
Boiling Point/Range	Not available.	Vapor Density	Not available.
Decomposition temperature	Not available.	Viscosity	Not available.
Partition Coefficient: n-octanol/water	0.1	Evaporation Rate	Not available.
Flash Point	Not available	Autoignition temperature	Not available.
Flammability	Not available.	Flammability or Explosive Limits:	
		Lower	Not available.
		Upper	Not available.
Solubility(ies)	Insoluble in water.		
Other	Dilute mineral acids: Sparingly soluble. Ethanol: Very slightly soluble. Chloroform: Very slightly soluble. Dilute solutions of alkali hydroxides: Soluble Chemical family Imidazole derivative; thiopurine. Molecular formula C9H7N7O2S Molecular weight 277.27		

Section 10: Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability	Material is stable under normal conditions.
Hazardous Polymerization	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	Contact with incompatible materials.
Incompatible Materials	Oxidizing agents. Strong reducing agents. Peroxides. Phenols. Strong alkalis. Acids.
Hazardous Decomposition Products	NOx. SOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions.

Section 11: Toxicological Information

RTECS	UO8925000
Acute Toxicity	Harmful if swallowed. Acute Oral LD50 Mouse 2500 mg/kg Rat 400 mg/kg
Skin Corrosion/Irritation	May cause an allergic skin reaction. Based on information from industrial exposure, this material may cause: Contact dermatitis.
Serious Eye Damage/Irritation	Not available.
Respiratory or Skin Sensitization	Not available.
Germ Cell Mutagenicity	May cause genetic defects. Chromosomal damage has been observed in humans receiving this material therapeutically.
Carcinogenicity	May cause cancer.
Reproductive Toxicity	May damage fertility or the unborn child.

Routes of Entry

Skin Ingestion.

Symptoms Related to Exposure

Nausea. Vomiting. Diarrhea. Loss of appetite. Fever. Chills. Lower back pain. Muscle pain. Joint pain. Tiredness. Weakness. Bleeding or bruising. Blood in urine. Black or bloody stools. Pinpoint red spots on skin. Skin rash. Hair loss.

Potential Health Effects

Not available.

Target Organ(s)

Causes damage to organs (bone marrow) through prolonged or repeated exposure

Section 12: Ecological Information**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Aquatic Acute Crustacea EC50 Daphnia >= 100 mg/l, 48 hours

Persistence and Degradability

The product is not readily biodegradable

Bioaccumulative Potential

Not available.

Mobility in Soil

Not available.

Other Adverse Effects

Not available.

Section 13: Disposal Considerations**Waste Disposal**

Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. The waste code should be assigned in discussion between the user, the producer and the waste disposal company. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Disposal of Container

Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Other Considerations

Not available.

Section 14: Transport Information**DOT Classification**

Not a DOT controlled material (United States). This material is not classified dangerous good according to international transportation regulations (ADR/RID-IMDG-ICAO/IATA).

Section 15: Regulatory Information**Regulations**

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 Toxic Substances Control Act (TSCA) TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated CERCLA Hazardous Substance List (40 CFR 302.4) Not listed. SARA 304 Emergency release notification Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not listed. SARA 302 Extremely hazardous substance Superfund Amendments and Reauthorization Act of 1986 (SARA) Not listed. YesSARA 311/312 Hazardous chemical Acute toxicity (any route of exposure) Respiratory or skin sensitization Germ cell mutagenicity Carcinogenicity Reproductive toxicity Specific target organ toxicity (single or repeated exposure) Classified hazard categories SARA 313 (TRI reporting) Not regulated. Other federal regulations Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated. Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated. Not regulated. Safe Drinking Water Act (SDWA) US state regulations California Proposition 65 This product can expose you to Azathioprine, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.



Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

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Other

Not available.

Section 16: Other Information

Not available.