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MSDS Number: **P5359** * * * * * *Effective Date:* ***05/14/03*** * * * * * *Supercedes:* ***11/02/01***

MSDS Material Safety Data Sheet

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

Mallinckrodt CHEMICALS J.T.Baker

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

POTASH SULFURATED

1. Product Identification

Synonyms: Liver of sulfur; sulfurated potassa; hepar sulfuris
CAS No.: 39365-88-3 (Potash)
Molecular Weight: Not applicable to mixtures.
Chemical Formula: Not applicable.
Product Codes:
J.T. Baker: 2909
Mallinckrodt: 7155

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Potassium Trisulfide	37488-75-8	25%	Yes
Potassium Thiosulfate Hydrated	10294-66-3	75%	Yes

3. Hazards Identification

Emergency Overview

WARNING! FLAMMABLE SOLID. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 3 - Severe (Flammable)
Reactivity Rating: 2 - Moderate
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES; CLASS D EXTINGUISHER
Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:
Inhalation of dust can irritate the respiratory tract. Production of hydrogen sulfide from reaction with acids or high temperature hydrolysis is a significant secondary hazard.
Ingestion:
Mildly corrosive to mucous membrane due to hydrolysis of potassium sulfide but greater danger is formation of hydrogen sulfide in the stomach and its absorption. Nausea, vomiting and diarrhea can occur.
Skin Contact:
Irritant especially if hydrolysis occurs on moist skin.
Eye Contact:
Irritant, possibly corrosive or abrasive in acute cases. Conjunctivitis, photophobia, pain, blurred vision are symptoms.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion:
Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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5. Fire Fighting Measures

Fire:
Flammable solid. Dust may form explosive mixtures with air.
Explosion:
Not considered to be an explosion hazard. Contact with acids or steam may produce flammable, explosive, poisonous hydrogen sulfide.
Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Sealed containers may rupture when heated.

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6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

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7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):
For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:
Wear protective gloves and clean body-covering clothing.
Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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9. Physical and Chemical Properties

Appearance:
Yellow-brown to brown lumps.
Odor:
Rotten egg, sulfide odor.
Solubility:
Soluble in water.
Specific Gravity:
No information found.
pH:
No information found.
% Volatiles by volume @ 21C (70F):
0
Boiling Point:
Not applicable.
Melting Point:
No information found.
Vapor Density (Air=1):
No information found.
Vapor Pressure (mm Hg):
No information found.
Evaporation Rate (BuAc=1):
No information found.

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10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage. May air-oxidize. Decomposes on exposure to air forming free sulfur and potassium carbonate.
Hazardous Decomposition Products:
Burning may produce sulfur oxides.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Oxidizing agents, halogens and halogenated organic compounds, acids, alcohols, strong reducing agents, carbonated waters, acid salts, combustible materials, most common metals, zinc, aluminum. Avoid air, heat, flame, sources of ignition, dusting.
Conditions to Avoid:
Dusting, air, heat, flames, ignition sources and incompatibles.

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11. Toxicological Information

No LD50/LC50 information found relating to normal routes of occupational exposure.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Potassium Trisulfide (37488-75-8)	No	No	None
Potassium Thiosulfate Hydrated (10294-66-3)	No	No	None

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12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

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13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: FLAMMABLE SOLID, INORGANIC, N.O.S. (SULFURATED POTASH)
Hazard Class: 4.1
UN/NA: UN3178
Packing Group: II
Information reported for product/size: 100LB

International (Water, I.M.O.)

Proper Shipping Name: FLAMMABLE SOLID, INORGANIC, N.O.S. (SULFURATED POTASH)
Hazard Class: 4.1
UN/NA: UN3178
Packing Group: II
Information reported for product/size: 100LB

International (Air, I.C.A.O.)

Proper Shipping Name: FLAMMABLE SOLID, INORGANIC, N.O.S. (SULFURATED POTASH)
Hazard Class: 4.1
UN/NA: UN3178
Packing Group: II
Information reported for product/size: 100LB

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\---------------------------------

Ingredient	TSCA	EC	Japan	Australia
Potassium Trisulfide (37488-75-8)	Yes	Yes	Yes	No
Potassium Thiosulfate Hydrated (10294-66-3)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\---------------------------------

		--Canada--		
Ingredient	Korea	DSL	NDSL	Phil.
Potassium Trisulfide (37488-75-8)	Yes	Yes	No	No
Potassium Thiosulfate Hydrated (10294-66-3)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------------

	-SARA 302-		------SARA 313------	
Ingredient	RQ	TPQ	List	Chemical Catg.

Potassium Trisulfide (37488-75-8)	No	No	No	No
Potassium Thiosulfate Hydrated (10294-66-3)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\----------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Potassium Trisulfide (37488-75-8)	No	No	No
Potassium Thiosulfate Hydrated (10294-66-3)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: No (Mixture / Solid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health: **2** Flammability: **3** Reactivity: **0**
Label Hazard Warning:
WARNING! FLAMMABLE SOLID. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. DUST MAY FORM FLAMMABLE OR EXPLOSIVE MIXTURE WITH AIR.
Label Precautions:
Keep away from heat, sparks and flame.
Keep container closed.
Use only with adequate ventilation.
Avoid breathing dust.
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Label First Aid:
If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.
Product Use:
Laboratory Reagent.
Revision Information:
MSDS Section(s) changed since last revision of document include: 8.
Disclaimer:

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