Cab. 1

MSDS Number: **S5022** * * * * * *Effective Date:* ***03/26/04*** * * * * * *Supercedes:* ***10/29/01***

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.

SODIUM SULFATE

1. Product Identification

Synonyms: Sodium sulfate decahydrate; disodium sulfate decahydrate; glauber's salt; sulfuric acid, sodium salt, decahydrate; sodium sulfate, 10-hydrate
CAS No.: 7757-82-6 (Anhydrous) 7727-73-3 (Decahydrate)
Molecular Weight: 322.20
Chemical Formula: Na2SO4.10H2O
Product Codes:
J.T. Baker: 3889, 3890
Mallinckrodt: 8012, 8027

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Sulfate	7757-82-6	98 - 100%	Yes

3. Hazards Identification

Emergency Overview

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

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

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:
Not expected to be a health hazard.
Ingestion:
Mildly toxic by ingestion. Systemic toxicity is unlikely unless massive amounts have been swallowed. Drinking water with > 500 mg/L may result in gastrointestinal irritation.
Skin Contact:
No adverse effects expected.
Eye Contact:
No adverse effects expected but dust may cause mechanical irritation.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
Not expected to require first aid measures.
Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
Skin Contact:
Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact:
Wash thoroughly with running water. Get medical advice if irritation develops.

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5 Fire Fighting Measures

Fire:
Not considered to be a fire hazard.

Explosion:
Not considered an explosion hazard, but violent explosions occur when potassium sulfate and sodium sulfate are melted with aluminum.
Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire.
Special Information:
Use protective clothing and breathing equipment appropriate for the surrounding fire.

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6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

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7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. 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.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.
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:
White efflorescent crystals or granules.
Odor:
Odorless.
Solubility:
Soluble in 1.5 parts of water @ 25C (77F).
Specific Gravity:
1.46
pH:
Aqueous solution is neutral.
% Volatiles by volume @ 21C (70F):
0
Boiling Point:
No information found.
Melting Point:
32C (90F) Loses water at 100C (212F). Anhydrous melts ca. 844C (1551F)
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. Effloresces in dry air.
Hazardous Decomposition Products:
Oxides of sulfur and sodium may form when heated to decomposition.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
In combination with sodium sulfate, aluminum and magnesium will explode @ 800C (1472F); strong mineral acids and bases.
Conditions to Avoid:
Air, incompatibles.

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11. Toxicological Information

Investigated as a tumorigen, mutagen, reproductive effector. No LD50/LC50 information found relating to normal routes of occupational exposure.

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

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Sodium Sulfate (7757-82-6)	No	No	None

12. Ecological Information

Environmental Fate:
When released into the soil, this material is expected to leach into groundwater. This material is not expected to significantly bioaccumulate.
Environmental Toxicity:
This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l. The EC50/48-hour values for daphnia are over 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal 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

Not regulated.

15. Regulatory Information

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

Ingredient	TSCA	EC	Japan	Australia
Sodium Sulfate (7757-82-6)	Yes	Yes	Yes	Yes

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

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Sodium Sulfate (7757-82-6)	Yes	Yes	No	Yes

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

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Sodium Sulfate (7757-82-6)	No	No	No	No

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

,gredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Sodium Sulfate (7757-82-6)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: No Chronic: No Fire: No Pressure: No
Reactivity: No (Pure / 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: 1 Flammability: 0 Reactivity: 0
Label Hazard Warning:
As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.
Label Precautions:
None.
Label First Aid:
Not applicable.
Product Use:
Laboratory Reagent.
Revision Information:
MSDS Section(s) changed since last revision of document include: 3.
Disclaimer:
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Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)