

\*\*SODIUM THIOSULFATE PENT

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MATERIAL SAFETY DATA SHEET

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SUBSTANCE IDENTIFICATION

SUBSTANCE: \*\*SODIUM THIOSULFATE PENTAHYDRATE\*\* CAS-NUMBER 10102-17-7

TRADE NAMES/SYNONYMS:  
AMETOX; ANTICHLOR; HYPQ; SODIUM HYPOSULFITE; SODIOTHIOI; SULFOTHIORINE;  
THIOSULFURIC ACID, DISODIUM SALT, PENTAHYDRATE; S-445; S-474; ACC21715

CHEMICAL FAMILY:  
INORGANIC SALT

MOLECULAR FORMULA: NA2-S2-O3.5H2O MOL WT: 248.20

CERCLA RATINGS (SCALE 0-3): HEALTH=2 FIRE=0 REACTIVITY=0 PERSISTENCE=0

COMPONENTS AND CONTAMINANTS

COMPONENT: SODIUM THIOSULFATE PENTAHYDRATE PERCENT: 100

OTHER CONTAMINANTS: NONE

EXPOSURE LIMITS:  
NONE ESTABLISHED

PHYSICAL DATA

DESCRIPTION: COLORLESS, ODORLESS, MONOCLINIC CRYSTALS. COOLING TASTE  
AND BITTER AFTER TASTE BOILING POINT: 212 F LOSES H2O

MELTING POINT: 118 F (48 C) SPECIFIC GRAVITY: 1.7 PH: 6.5-8.0

SOLUBILITY IN WATER: SOLUBLE, DECOMPOSES

FIRE AND EXPLOSION DATA

FIRE AND EXPLOSION HAZARD:  
NEGLECTIBLE FIRE AND NEGLECTIBLE EXPLOSION HAZARD IN DUST FORM WHEN EXPOSED TO  
HEAT OR FLAME.

FIREFIGHTING MEDIA:

DRY CHEMICAL, CARBON DIOXIDE, WATER SPRAY OR FOAM  
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FOR LARGER FIRES, USE WATER SPRAY, FOG OR ALCOHOL FOAM  
(1984 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.3).

FIREFIGHTING:

NO ACUTE HAZARD. MOVE CONTAINER FROM FIRE AREA IF POSSIBLE. AVOID BREATHING  
VAPORS OR DUSTS; KEEP UPRIND.

TOXICITY

300 MG/KG/7 DAYS ORAL-HUMAN TDLO; 5600 MG/KG INTRAPERITONEAL-MOUSE LD50;  
3000 MG/KG INTRAVENOUS-DOG LDLO; CARCINOGEN STATUS: NONE.  
SODIUM THIOSULFATE PENTAHYDRATE IS MODERATELY TOXIC BY INTRAVENOUS ROUTES.  
POISONING AFFECTS THE BLOOD. LARGE ORAL DOSES HAVE A CATHARTIC ACTION.

HEALTH EFFECTS AND FIRST AID

INHALATION:  
IRRITANT.

ACUTE EXPOSURE- MAY CAUSE RESPIRATORY IRRITATION AND COUGHING.

CHRONIC EXPOSURE- MAY CAUSE MUCOUS MEMBRANE IRRITATION.

FIRST AID- REMOVE FROM EXPOSURE AREA TO FRESH AIR IMMEDIATELY. IF BREATHING  
HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. KEEP AFFECTED PERSON WARM AND AT  
REST. GET MEDICAL ATTENTION.

SKIN CONTACT:  
IRRITANT.

ACUTE EXPOSURE- CONTACT MAY CAUSE IRRITATION.

CHRONIC EXPOSURE- REPEATED OR PROLONGED CONTACT MAY CAUSE DERMATITIS.

FIRST AID- REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH AFFECTED  
AREA WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO  
EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL  
ATTENTION.

EYE CONTACT:  
IRRITANT.

ACUTE EXPOSURE- DUST MAY CAUSE IRRITATION, REDNESS AND PAIN.

CHRONIC EXPOSURE- MAY CAUSE CONJUNCTIVITIS.

FIRST AID- WASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF WATER, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (APPROXIMATELY 15-20 MINUTES). GET MEDICAL ATTENTION.

INGESTION:  
IRRITANT.

ACUTE EXPOSURE- LARGE DOSES MAY CAUSE IRRITATION, NAUSEA, AND DIARRHEA.

FIRST AID- IF VICTIM IS CONSCIOUS, IMMEDIATELY GIVE 2 TO 4 GLASSES OF WATER, AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF THROAT. GET MEDICAL ATTENTION IMMEDIATELY.

REACTIVITY

REACTIVITY:  
STABLE UNDER NORMAL TEMPERATURES AND PRESSURES.

INCOMPATIBILITIES:  
WHEN MIXED WITH SODIUM NITRITE AND EVAPORATED TO DRYNESS, A VIOLENT EXPLOSION OCCURED. AN EXPLOSION ALSO OCCURS WHEN MIXED AND HEATED WITH POTASSIUM NITRATE OR SODIUM NITRATE. IT IS ALSO INCOMPATIBLE WITH HALOGENS, ACIDS, LEAD, SILVER SALTS, AND MERCURY.

DECOMPOSITION:  
THERMAL DECOMPOSITION MAY RELEASE TOXIC OXIDES OF SULFUR.

POLYMERIZATION:  
HAZARDOUS POLYMERIZATION HAS NOT BEEN REPORTED TO OCCUR UNDER NORMAL TEMPERATURES AND PRESSURES.

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CONDITIONS TO AVOID  
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AVOID HEATING TO DECOMPOSITION AND CONTACT WITH OR STORAGE WITH INCOMPATIBLE SUBSTANCES.

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SPILL AND LEAK PROCEDURES  
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OCCUPATIONAL SPILL:  
WHEN MATERIAL NOT INVOLVED IN FIRE:  
DO NOT ALLOW MATERIAL TO CONTAMINATE SEWERS AND WATER SOURCES.  
BUILD DIKES FOR CONTAINMENT OF SPILL FLOW.  
SWEEP UP AND PLACE IN A SUITABLE CONTAINER (FIBERBOARD), FOR LATER DISPOSAL.

PROTECTIVE EQUIPMENT

VENTILATION:  
PROCESS ENCLOSURE, LOCAL EXHAUST, OR GENERAL DILUTION VENTILATION SYSTEM.

RESPIRATOR:  
HIGH LEVELS- DUST MASK.

FIREFIGHTING- SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE-PIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE-PRESSURE MODE.

CLOTHING: PROTECTIVE CLOTHING NOT REQUIRED. AVOID REPEATED OR PROLONGED CONTACT WITH THIS SUBSTANCE.

GLOVES: PROTECTIVE GLOVES ARE NOT REQUIRED BUT RECOMMENDED.

EYE PROTECTION: EMPLOYEE MUST WEAR SPLASH-PROOF OR DUST-RESISTANT SAFETY GOGGLES TO PREVENT EYE CONTACT WITH THIS SUBSTANCE.

AUTHORIZED - FISHER SCIENTIFIC GROUP, INC.  
CREATION DATE: 03/15/85 REVISION DATE: 04/23/85

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