



chemists helping chemists in research & industry

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DATE: 08/05/91
CUST#: 938609
PO#: P0068929

M A T E R I A L S A F E T Y D A T A S H E E T PAGE 1

IDENTIFICATION

PRODUCT #: 21542-2
CAS #: 7782-63-0
MF: FE04S

NAME: IRON(II) SULFATE HEPTAHYDRATE, 99+%,
A.C.S. REAGENT

SYNONYMS

COPPERAS * FEOSOL * FER-IN-SOL * FERD-GRADUMET * FERROUS SULFATE
HEPTAHYDRATE * FESOFOR * FESOTYME * GREEN VITROL * HAEMOFORT *
IRONATE * IRON VITROL * IROSUL * MOL-IRON * PRESFERSUL * SULFERROUS *

TOXICITY HAZARDS

RTECS NO: N08510000

IRON(II) SULFATE (1:1), HEPTAHYDRATE

TOXICITY DATA

ORL-MUS LD50: 1520 MG/KG

AJMSA9 230,491,55

IPR-MUS LD50: 245 MG/KG

ARZNAD 17,748,67

IVN-MUS LD50: 51 MG/KG

AJMSA9 230,491,55

REVIEWS, STANDARDS, AND REGULATIONS

ACGIH TLV-TWA 1 MG/(FE)/M3 85INA8 5,328,86

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,4388,89

MSHA STANDARD-AIR: TWA 1 MG(FE)/M3 DTLVS* 3,138,71

NOES 1983: HZD X3016000; TNF 6; NIS 352; NOS 12; TNE 7242; TFE 2396

TARGET ORGAN DATA

BEHAVIORAL (SOMNOLENCE)

CARDIAC (OTHER CHANGES)

LUNGS, THORAX OR RESPIRATION (RESPIRATORY DEPRESSION)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES (RTECS)
DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR COMPLETE INFORMATION.

HEALTH HAZARD DATA

ACUTE EFFECTS

HARMFUL IF SWALLOWED.

MAY BE HARMFUL IF INHALED.

MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

CAUSES EYE AND SKIN IRRITATION.

MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER

RESPIRATORY TRACT.

TARGET ORGAN(S):

G.I. SYSTEM

LIVER

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

CONTINUED ON NEXT PAGE

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HEALTH HAZARD DATA

FIRST AID

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN.
WASH CONTAMINATED CLOTHING BEFORE REUSE.

ADDITIONAL INFORMATION

INGESTION OF 5 GRAMS (1/6 OUNCE) OR LESS CAN PRODUCE DROWSINESS, IRRITABILITY, WEAKNESS, ABDOMINAL PAIN, NAUSEA, VOMITING AND BLOODY STOOLS. DELAYED SYMPTOMS CAN INCLUDE FLUID IN THE LUNGS, LIVER ABNORMALITIES, SHOCK, COMA, INTESTINAL BLOCKAGE AND BREAKDOWN OF THE STOMACH AND INTESTINAL LINING, TACHYCARDIA. DEATH HAS RESULTED FROM INGESTION OF LESS THAN AN OUNCE.

PHYSICAL DATA

SPECIFIC GRAVITY: 1.898
VAPOR PRESSURE: 14.6 MM @ 25 C
APPEARANCE AND ODOR
LIGHT-BLUE OR LIGHT BLUE-GREEN

FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA

CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

REACTIVITY DATA

INCOMPATIBILITIES

STRONG OXIDIZING AGENTS
AIR SENSITIVE
MOISTURE SENSITIVE

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----- REACTIVITY DATA -----

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS
SULFUR OXIDES

----- SPILL OR LEAK PROCEDURES -----

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

EVACUATE AREA.
WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.
SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.
AVOID RAISING DUST.
VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

WASTE DISPOSAL METHOD

THE MATERIAL SHOULD BE DISSOLVED IN 1) WATER; 2) ACID SOLUTION OR 3) OXIDIZED TO A WATER-SOLUBLE STATE. PRECIPITATE THE MATERIAL AS THE SULFIDE, ADJUSTING THE PH OF THE SOLUTION TO 7 TO COMPLETE PRECIPITATION. FILTER THE INSOLUBLES AND DISPOSE OF THEM IN A HAZARDOUS-WASTE SITE. DESTROY ANY EXCESS SULFIDE WITH SODIUM HYPOCHLORITE. NEUTRALIZE THE SOLUTION BEFORE FLUSHING DOWN THE DRAIN.
OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

----- PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE -----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.
SAFETY SHOWER AND EYE BATH.
MECHANICAL EXHAUST REQUIRED.
DO NOT BREATHE DUST.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
AVOID PROLONGED OR REPEATED EXPOSURE.
WASH THOROUGHLY AFTER HANDLING.
IRRITANT.
HARMFUL SOLID.
KEEP TIGHTLY CLOSED.
AIR AND MOISTURE SENSITIVE
STORE IN A COOL DRY PLACE.

----- ADDITIONAL PRECAUTIONS AND COMMENTS -----

ADDITIONAL INFORMATION

MIXING IRON(II) SULFATE WITH SODIUM NITRATE AND ARSENIC(III) OXIDE

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ADDITIONAL PRECAUTIONS AND COMMENTS

RESULTED IN SPONTANEOUS IGNITION. ADDITION OF TRACE AMOUNTS OF IRON(II) SULFATE TO METHYL ISOCYANOACETATE RESULTED IN EXPLOSIVE DECOMPOSITION AT 25 C. INCOMPATIBLE WITH ALKALIES, CARBONATES, SILVER AND GOLD SALTS, POTASSIUM IODIDE, LEAD ACETATE, SODIUM BORATE, POTASSIUM AND SODIUM TARTRATE.

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