

LTS RESEARCH LABORATORIES, INC.
MATERIAL SAFETY DATA SHEET
YTTRIUM IRON ALLOY

GENERAL

MANUFACTURER/SUPPLIER: LTS RESEARCH LABORATORIES, INC.

COMPANY'S STREET: 37 RAMLAND ROAD
COMPANY'S CITY: ORANGEBURG
COMPANY'S STATE: NEW YORK
COMPANY'S ZIP CODE: 10962
EMERGENCY CHEMTREC #: 800-262-8200
COMPANY'S EMERGENCY TEL. #: 800-424-9300 (LOCAL)
703-527-3887 (INTERNATIONAL)

COMPANY'S TEL #: 845-494-2940
DATE MSDS PREPARED: 05/04/05
DATE MSDS REVISED: 11/05/12

1. PRODUCT IDENTIFICATION

PRODUCT NAME: YTTRIUM IRON ALLOY
CHEMICAL FORMULA: Y/Fe (Y₂Fe₁₇)
CAS NUMBER: 7440-65-5/7439-89-6

2. PHYSICAL AND CHEMICAL CHARACTERISTICS

APPEARANCE: GREY PELLETS, PIECES OR POWDER
BOILING POINT: NOT DETERMINED
MELTING POINT: NOT DETERMINED
VAPOR PRESSURE (MM HG/70 F): NOT DETERMINED
VAPOR DENSITY (AIR=1): NOT DETERMINED
DENSITY: NOT DETERMINED
DECOMPOSITION TEMPERATURE: NOT DETERMINED
EVAPORATION RATE AND REF: NOT DETERMINED
SOLUBILITY IN WATER: INSOLUBLE
PERCENT VOLATILES BY VOLUME: NOT DETERMINED

3. HAZARD IDENTIFICATION

FLASH POINT: NON-FLAMMABLE
FLASH POINT METHOD: N/P
LOWER EXPLOSIVE LIMIT: N/R
UPPER EXPLOSIVE LIMIT: N/R
EXTINGUISHING MEDIA: WATER, CO₂, FOAM, and DRY CHEMICAL SPECIAL FIRE
FIGHTING PROC: USE SELF CONTAINED BREATHING APPARATUS & FULL PROTECTIVE CLOTHING.

UNUSUAL FIRE AND EXPL HAZRDS: N/R
REPORT FOR NIIN: 0F034378

4. REACTIVITY DATA

STABILITY: STABLE
CONDITION TO AVOID: EXTREME HEAT
MATERIALS TO AVOID: CONCENTRATED MINERAL ACIDS & OXIDIZERS.
HAZARDOUS DECOMP. PRODUCTS: TOXIC METAL FUMES & PARTICLES.
HAZARDOUS POLYMERIZATION: DOES NOT OCCUR
CONDITIONS TO AVOID (POLY): NONE KNOWN

EXPLOSION HAZARDS: IRON BECOMES MORE REACTIVE AS IT IS MORE FINELY DIVIDED. MAY HAVE AN EXPLOSIVE OR VIOLENT REACTION WITH AMMONIUM NITRATE + HEAT, AMMONIUM PEROXODISULFATE, CHLORIC ACID, CHLORINE TRIFLUORIDE, CHLOROFORMADINIUM NITRATE. REDUCED IRON REACTS WITH WATER TO PRODUCE EXPLOSIVE HYDROGEN GAS.

5. HEALTH HAZARD DATA

LD50-LC50 MIXTURE: N/K
ROUTE OF ENTRY
INHALATION: YES
SKIN: YES
INGESTION: NO
HEALTH HAZ ACUTE AND CHRONIC:
EYES/SKIN/INHALATION: IRRITATION. YTTRIUM SALTS HAVE BEEN SHOWN TO CAUSE PERMANENT OPACIFICATION OF THE CORNEA AFTER CONTACT OF THE EYE WHEN THE CORNEAL EPITHELIUM HAS BEEN DAMAGED & MAY CAUSE BLOOD EFFECTS IF ABSORBED INTO THE BODY. MAY CAUSE LUNG EFFECTS. HARMFUL IF SWALLOWED.
IRON COMPOUNDS HAVE VARYING TOXICITY. SOME IRON COMPOUNDS ARE SUSPECTED CARCINOGENS. IN GENERAL, FERROUS COMPOUNDS ARE MORE TOXIC THAN FERRIC COMPOUNDS. ACUTE EXPOSURE TO EXCESSIVE LEVELS OF FERROUS COMPOUNDS CAN CAUSE LIVER AND KIDNEY DAMAGE, ALTERED RESPIRATORY RATES AND CONVULSIONS.
NTP: NO CARCINOGENICITY
IARC: NO CARCINOGENICITY
OSHA: NO
EXPLANATION CARCINOGENICITY: NONE
SIGNS/SYMPTOMS OF OVEREXP: IRRITATION
MEDICAL COND. AGGRAV. BY EXP: EXISTING LUNG/BLOOD DISORDERS

6. EMERGENCY/FIRST AID PROCEDURE

EYES: FLUSH W/PLENTY OF WATER FOR 20 MINUTES
SKIN: WASH WITH SOAP & WATER
INHALATION: REMOVE PERSON TO FRESH AIR. GIVE OXYGEN IF DIFFICULT BREATHING/APPLY CPR IF NOT BREATHING.
INGESTION: GIVE 1-2 GLASSES OF WATER & INDUCE VOMITING IF CONSCIOUS. OBTAIN MEDICAL ATTENTION IN ALL CASES.

7. HANDLING AND STORAGE

IF MATERIAL RELEASED/SPILL: COLLECT AND PLACE IN A POLYETHYLENE/POLYETHYLENE-LINED WASTE CONTAINER. STORE UNDER COOL AND DRY CONDITIONS UNTIL DISPOSED. MATERIAL IN DAMAGED/LEAKING CONTAINERS SHOULD BE TRANSFERRED TO AN INTACT METAL/POLYETHYLENE CONTAINER.
NEUTRALIZING AGENT: N/K

WASTE DISPOSAL METHOD: CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

8. PERSONAL PROTECTION/CONTROL MEASURES

RESPIRATORY PROTECTION: USE NIOSH/MSHA APPROVED & PROPERLY FITTED DUST RESPIRATOR IF PEL IS EXCEEDED.
VENTILATION: MECHANICAL, A MINIMUM VELOCITY OF 100 CUBIC FEET PER MINUTE IS RECOMMENDED.
PROTECTIVE GLOVES: REQUIRED
REPORT FOR NIIN: 00F034378
EYE PROTECTION: CHEMICAL GOGGLES/SAFETY GLASSES
OTHER PROTECTIVE EQUIPMENT: LABORATORY COAT
WORK HYGIENIC PRACTICES: WASH THOROUGHLY AFTER HANDLING & BEFORE EATING OR DRINKING.

9. TRANSPORTATION DATA

UN NUMBER: NONE
HAZARD CLASS: NONE
ADR/RID CLASS: NONE
IMDG CLASS: NONE
AIR TRAN. ICAO/IATA CLASS: NONE
MARITIME TRAN. IMDG CLASS: NONE

10. OTHER INFORMATION

THIS SAFETY DATA SHEET SHOULD BE USED IN CONJUNCTION WITH TECHNICAL SHEETS. IT DOES NOT REPLACE THEM. THE INFORMATION GIVEN IS BASED ON OUR KNOWLEDGE OF THIS PRODUCT, AT THE TIME OF PUBLICATION. IT IS GIVEN IN GOOD FAITH. THE ATTENTION OF THE USER IS DRAWN TO THE POSSIBLE RISKS INCURRED BY USING THE PRODUCT FOR ANY OTHER PURPOSE OTHER THAN THAT FOR WHICH IT WAS INTENDED. THIS DOES NOT IN ANY WAY EXCUSE THE USER FROM KNOWING AND APPLYING ALL THE REGULATIONS GOVERNING HIS ACTIVITY. IT IS THE SOLE RESPONSIBILITY OF THE USER TO TAKE ALL PRECAUTIONS REQUIRED IN HANDLING THE PRODUCT. THE AIM OF THE MANDATORY REGULATIONS MENTIONED IS TO HELP THE USER TO FULFILL HIS OBLIGATIONS REGARDING THE USE OF HAZARDOUS PRODUCTS.