

LTS RESEARCH LABORATORIES, INC.
MATERIAL SAFETY DATA SHEET
COBALT IRON

GENERAL

MANUFACTUER/SUPPLIER: LTS RESEARCH LABORATORIES, INC.

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COMPANY'S CITY: ORANGEBURG
COMPANY'S STATE: NEW YORK
COMPANY'S ZIP CODE: 10962
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COMPANY'S EMERGENCY TEL. #: 800-424-9300 (LOCAL)
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DATE MSDS PREPARED: 02/03/05
DATE MSDS REVISED: 06/13/11

1. PRODUCT IDENTIFICATION

PRODUCT NAME: Iron Cobalt
CHEMICAL NATURE: METALLIC ELEMENT
FORMULA: FeCo
CAS #: 7440-48-4 (COBALT)
7439-89-6 (IRON)

2. PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT 760 mm Hg: N/A
MELTING POINT: N/A
SPECIFIC GRAVITY: N/A
MOLECULAR WEIGHT: N/A
VAPOR DENSITY: N/A
VAPOR PRESSURE :(mm Hg): N/A
% VOLATILES: N/A
SOLUBILITY IN H₂O: INSOLUBLE
APPEARANCE AND ODOR: SILVER-WHITE TARGETS, RODS, ODORLESS

3. HAZARD IDENTIFICATION

HAZARDOUS COMPONENTS %
COBALT: 0-100%
OSHA/PEL: 0.10 mg/m³
ACGIH/TLV: 0.02 mg/m³
IRON: 0-100%
OSHA/PEL: 10 mg/m³
ACGIH/TLV: 6 mg/m³
HMIS RATINGS (0-4):
HEALTH: 2
FLAMMABILITY: 0
REACTIVITY: 0
HMIS PROTECTIVE EQUIPMENT: E: GLASSES, GLOVES, DUST RESPIRATOR

4. FIRE FIGHTING MEASURES

FLASH POINT: N/A
AUTOIGNITION TEMPERATURE: N/A
FLAMMABLE LIMITS:
UPPER: N/A
LOWER: N/A
FLAMMABILITY: N/A

EXTINGUISHING MEDIA:	USE DRY SAND/LIR OR EARTH TO SMOTHER FIRE. DO NOT USE WATER.
SPECIAL FIRE FIGHTING PROCEDURES:	FIREFIGHTERS MUST WEAR FULL-FACE, SELF-CONTAINED BREATHING APPARATUS WITH FULL PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES. FUMES FROM FIRE ARE HAZARDOUS. ISOLATE RUNOFF TO PREVENT ENVIRONMENTAL POLLUTION.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	N/E

5. HEALTH HAZARD INFORMATION

EFFECTS OF EXPOSURE:

ACUTE EFFECTS:

INHALATION:	MAY CAUSE IRRITATION, ASTHMA, SHORTNESS OF BREATH TO THE RESPIRATORY SYSTEM AND POSSIBLY.
INGESTION:	MAY CAUSE GASTROINTESTINAL IRRITATION WITH NAUSEA, VOMITING AND DIARRHEA.
SKIN:	MAY CAUSE IRRITATION AND DERMATITIS AFTER PROLONG OR/AND REPEATED EXPOSURE. MAY CAUSE SKIN SENSITIZATION, ALLERGIC REACTION.
EYE:	MAY CAUSE IRRITATION LEADING TO CONJUNCTIVITIS

CHRONIC AFFECTS:

INHALATION:	CHRONIC INHALATION MAY CAUSE PULMONARY FIBROSIS AND ASTHMA, RESTRICTED PULMONARY FUNCTION.
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SKIN:	REPEATED EXPOSURE MAY CAUSE SENSITIZATION, DERMATITIS.
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TARGET ORGAN:	RESPIRATORY SYSTEM, LIVER, KIDNEY, SKIN
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CARCINOGENICITY:

NTP:	NO
IARC:	NO
OSHA:	NO

6. STABILITY

STABILITY:	STABLE UNDER NORMAL CONDITION.
CONDITION TO AVOID:	INCOMPATIBLE MATERIALS.
INCOMPATIBILITY (MATERIAL TO AVOID):	AMMONIUM NITRATE, ACETYLENE
HAZARDOUS DECOMPOSITION PRODUCTS:	METAL OXIDES.
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR.

7. EMERGENCY AND FIRST AID PROCEDURES:

INHALATION:	REMOVE VICTIM TO FRESH AIR, KEEP WARM AND QUIET, GIVE OXYGEN IF BREATHING IS DIFFICULT, SEEK MEDICAL ATTENTION.
INGESTION:	GIVE 1-2 GLASSES OF WATER OR MILK IF CONSCIOUS. SEEK MEDICAL ATTENTION. NEVER INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
SKIN:	FLUSH WITH WATER AND WASH WITH MILD SOAP AND WATER. SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST.
EYE:	FLUSH WITH WATER, INCLUDING UNDER UPPER AND LOWER EYELID, FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION IF SYMPTOMS PERSIST

8. HANDLING AND STORAGE

-----HANDLING AND STORAGE
KEEP CONTAINER TIGHTLY CLOSED. SUITABLE FOR ANY GENERAL CHEMICAL STORAGE AREA, BUT KEEP AWAY FROM STRONG OXIDIZING MATERIALS AND OTHER INCOMPATIBILITIES.
OTHER PRECAUTIONS: NORMAL LAB COAT

9. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR SUITABLE PROTECTIVE CLOTHING AND PROVIDE ADEQUATE VENTILATION. CAREFULLY VACUUM UP USING A HIGH EFFICIENCY PARTICULATE ABSOLUTE (HEPA) AIR FILTER AND PLACE IN A CLOSED CONTAINER FOR PROPER DISPOSAL. TAKE CARE NOT TO RAISE DUST.

WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

RESPIRATORY PROTECTION (SPECIFY TYPE):

NONE REQUIRED WHERE ADEQUATE VENTILATION CONDITIONS EXIST. IF AIRBORNE CONCENTRATION IS HIGH, USE AN APPROPRIATE RESPIRATOR OR DUST MASK. WHEN WORKING WITH FINELY DIVIDED POWDERS, WEAR A NIOSH-APPROVED DUST-MIST-VAPOR RESPIRATOR.

VENTILATION:

USE GENERAL OR LOCAL EXHAUST TO MAINTAIN CONCENTRATION AT OR BELOW THE PEL, TLV. WHEN WORKING WITH FINELY DIVIDED POWDERS, HANDLE IN A CONTROLLED, ENCLOSED ENVIRONMENT.

PROTECTIVE GLOVES:

RUBBER

EYE PROTECTION: SAFETY GLASSES

10. TOXICITY DATA

COBALT:

ORAL RAT LD50:

6171 mg/KG

CARCINOGENICITY:

ACGIH A3:

ANIMAL CARCINOGEN

IARC

GROUP 2B CARCINOGEN

OSHA:

POSSIBLE SELECT CARCINOGEN

IRON

ORAL RAT LD50:

30 gm/kg; INVESTIGATED AS A TUMORIGEN.

CARCINOGENICITY:

NTP

NO

IARC

NO

EPIDEMIOLOGY:

N/A

TERATOGENICITY:

N/A

REPRODUCTIVE EFFECT:

N/A

NEUROTOXICITY:

N/A

MUTAGENICITY:

N/A

11. TRANSPORTATION DATA

NOT REGULATED

HAZARD CLASS:

N/A

ADR//RID CLASS:

NOT RESTRICTED

IMDG CLASS:

NOT RESTRICTED

AIR TRAN. ICAO/IATA CLASS:

NOT RESTRICTED

MARITIME TRAN. IMDG CLASS:

NOT RESTRICTED

12. 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.