

LTS RESEARCH LABORATORIES, INC.  
MATERIAL SAFETY DATA SHEET  
MAGNESIUM SILICIDE

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: 02/03/05  
DATE MSDS REVISED: 07/28/11

1. PRODUCT IDENTIFICATION

PRODUCT NAME: MAGNESIUM SILICIDE  
FORMULA:  $Mg_2Si$ ,  $MgSi$   
CAS #: 22831-39-6  
MOLECULAR WEIGHT: 76.695

2. PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT 760 mm Hg: N/A  
MELTING POINT: 1102°C  
DENSITY: 1.94 g/cm<sup>3</sup>  
VAPOR DENSITY: N/A  
VAPOR PRESSURE: N/A  
% VOLATILES: N/A  
SOLUBILITY IN H<sub>2</sub>O: CONTACT WITH WATER LIBERATES EXTREMELY  
FLAMMABLE GASES.  
APPEARANCE AND ODOR: BLUE, GREY POWDER, GRANULES, SPATTERING TARGET  
ODORLESS

3. HAZARD IDENTIFICATION

HAZARD DESCRIPTION: F HIGHLY FLAMMABLE  
RISK PHRASES: R 15 CONTACT WITH WATER LIBERATES EXTREMELY  
FLAMMABLE GASES.

HIMS RATINGS:  
HEALTH: 1  
FIRE: 3  
REACTIVITY: 2

4. FIRE FIGHTING MEASURES

FLASH POINT: N/A  
AUTOIGNITION TEMPERATURE: N/A  
FLAMMABLE LIMITS:  
UPPER: N/A  
LOWER: N/A  
EXTINGUISHING MEDIA: CO<sub>2</sub>, EXTINGUISHING POWDER, DO NOT USE WATER.  
SPECIAL HAZARDS: IN CASE OF FIRE, METAL OXIDE FUME, SILICON OXIDE  
MAY BE RELEASSED.

5. HEALTH HAZARD INFORMATION

EFFECTS OF EXPOSURE:	DUST IS AN IRRITANT TO EYES AND MUCOUS MEMBRANES. SMALL PARTICLES IMBEDDED IN SKIN MAY CAUSE ULCERATION WHICH MAY BECOME INFECTED. INHALATION OF EXCESSIVE CONCENTRATIONS OF OXIDE FUME MAY CAUSE METAL FUME FEVER.
ACUTE EFFECTS:	
SKIN:	IRRITANT TO SKIN AND MUCOUS MMBRANES.
EYE:	IRRITATING EFFECT.
CHRONIC AFFECTS:	INORGANIC SILICON COMPUNDS MAY BE ACUTE INHALATION IRRITANTS. PROLONGED INHALATION MAY CAUSE PULMONARY FIBROSIS KNOWN AS SILICOSIS. INHALATION OF MAGNESIUM COMPOUNDS MAY CAUSE METAL FUME FEVER. METALLIC MAGNESIUM WHICH PERFORATES THE SKIN MAY CAUSE LOCAL LESIONS. SOME MAGNESIUM SALTS HAVE PRODUCED MUSCLE WEAKNESS, CARDIAC ARRHYTHMIAS, RESPIRATORY EFFECTS AND CHANGES IN BLOOD CHEMISTRY FOLLOWING INGESTION.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:	DAMAGED SKIN, EYE DISORDERS, CARDIOPULMONARY DISEASE
ROUTES OF EXPOSURE:	INHALATION, INGESTION, SKIN, EYE.
TARGET ORGAN:	RESPIRATORY SYSTEM, SKIN
CARCINOGENITY:	NONE IDENTIFIED
NTP:	NO
IARC:	NO
OSHA:	NO
EPA:	NO
ACGIH:	NO

---

6. STABILITY

---

STABILITY:	STABLE
INCOMPATIBILITY (MATERIAL TO AVOID):	HAZARDOUS WATER/ MOISTURE, AIR, OXIDIZING AGENTS
HAZARDOUS DECOMPOSITION PRODUCTS:	HAZARDOUS METAL OXIDE FUME., SILICON OXIDE
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR.

---

7. EMERGENCY AND FIRST AID PROCEDURES:

---

INHALATION:	REMOVE FROM EXPOSURE, SEEK IMMEDIATE MEDICAL ATTENTION.
INGESTION:	SEEK IMMEDIATE MEDICAL ATTENTION.
SKIN:	REMOVE ANY CONTAMINATED CLOTHING, BRUSH MATERIAL OFF OF SKIN, FLUSH WITH RUNNING WATER, WASH CAREFULLY WITH SOAP AND WATER. REMOVE SPLINTERS TO AVOID DELAYS IN HEALING.
EYE:	FLUSH WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES.

---

8. HANDLING AND STORAGE

---

HANDLING AND STORAGE	PROTECT AGAINST PHYSICAL DAMAGE. STORE FINELY DIVIDED SHIPS OR SHAVINGS IN DETACHED FIRE RESISTIVE BUILDING PROTECTED FROM MOISTURE AND AWAY FROM HALOGENS, ACIDS, AND ALL SOURCES OF IGNITION. HEAVIER MAY BE STORED IN THE OPEN. STORE AWAY FROM WATER/MOISTURE, AIR, OXIDIZING AGENTS.
OTHER PRECAUTIONS:	NORMAL LAB COAT.

---

## 9. SPILL OR LEAK PROCEDURES

---

### STEPS TO BE TAKEN IN

CASE MATERIAL IS

RELEASED OR SPILLED:

CLEAN UP USING NON-SPARKING TOOLS. NO SMOKING OR OPEN FLAMES IN CLEAN UP AREA.

WASTE DISPOSAL METHOD:

IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

---

## 10. TOXICITY DATA

---

CARCINOGENICITY:

NO CLASSIFICATION DATA ON CARCINOGENIC PROPERTIES OF THIS MATERIAL IS AVAILABLE FROM THE EPA, IARC, NTP, OSHA, OR ACGIH.

ADDITIONAL INFORMATION:

TO THE BEST OF OUR KNOWLEDGE THE ACUTE AND CHRONIC TOXICITY OF THIS SUBSTANCE IS NOT FULLY KNOWN.

---

## 11. TRANSPORTATION DATA

---

D.O.T. REGULATED FOR POWDER AND PIECES

PROPER SHIPPING NAME:

MAGNESIUM SILICIDE

UN NUMBER:

2624

HAZARD CLASS:

4.3

PACKAGING GROUP:

II

ADR/RID CLASS:

4.3 (W2) SUBSTANCES WHICH, IN CONTACT WITH WATER EMIT, FLAMMABLE GASES

IMDG CLASS:

4.3

AIR TRAN. ICAO/IATA CLASS:

4.3

---

## 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.