



MATERIAL SAFETY DATA SHEET
COMPLIES WITH 29 CFR 1910.1200.
OSHA HAZARD COMMUNICATION RULE

DATE OF LAST REVISION: 02-13-97

CHEMICAL IDENTITY

LABEL IDENTITY	MAGNESIUM FLUORIDE
CHEMICAL NAME/SYNONYMS	Sellaite, Afluon, Magnesium Difluoride
FORMULA	MgF₂
CHEMICAL FAMILY	METAL HALIDE
CALCULATED MOLECULAR WEIGHT	62.308
CAS REGISTRY NUMBER	7783-40-6, LISTED IN THE TSCA INVENTORY
HAZARDOUS INGREDIENTS	MAGNESIUM FLUORIDE
%: 100	TLV: 2.5 mg/m³ OSHA/PEL: 2.5mg/m³

(all magnesium materials may include typically 0.1-1% calcium unless otherwise specified)

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	White powder/pieces, odorless
BOILING POINT (°C)	2239
DENSITY (gm/cc)	2.9 - 3.2
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H ₂ O=1)	NA
SOLUBILITY IN WATER	Soluable
MELTING POINT (°C)	1396

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (°C)	NA
FLAMMABILITY	Non-flammable
EXTINGUISHING MEDIA	Use suitable extinguishing media for Surrounding materials and type of fire
SPECIAL FIRE FIGHTING PROCEDURES	Wear a self-contained breathing apparatus and full protective clothing
UNUSUAL FIRE & EXPLOSION HAZARDS	Material may emit toxic fumes of Mg and F if involved in a fire



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HEALTH HAZARD INFORMATION

TOXICITY DATA orl-guinea pig LDLo: **1000mg/kg**
SC: guinea pig MLD = 3000 mg/kg

HMIS RATING:

HEALTH: **2** FLAMMABILITY: **0** REACTIVITY: **0** PERSONAL PROTECTION: **F**

ROUTES OF ENTRY

INHALATION: **Yes**
SKIN: **Yes**
EYES: **Yes**
INGESTION: **Yes**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory, skin disorders**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **respiratory tract irritant. Sneezing, coughing, difficulty breathing and pulmonary edema possible. Can cause or aggravate attacks of asthma. Some signs of pulmonary fibrosis are possible. Mucous membrane irritant.**

DERMAL: **irritation, redness, inflammation possible, risk of serious injury.**

EYE: **irritation, redness, watering, inflammation possible, risk of serious injury.**

OTHER: *****please see attached sheet*****

CARCINOGENICITY: **none** NTP: **no** IARC MONOGRAPHS: **no** OSHA REGULATE: **no**

EMERGENCY FIRST AID PROCEDURES:

******SEEK MEDICAL ATTENTION FOR ALL SITUATIONS MENTIONED BELOW******

INGESTION: **Administer 1-2 glasses of milk/water, induce vomiting**

INHALATION: **Remove to fresh air, administer oxygen if breathing is difficult**

SKIN CONTACT: **brush material off skin and wash affected area with soap and water**

EYE CONTACT: **Flush eyes for at least 15 minutes with lukewarm water**

REACTIVITY DATA

CONDITIONS CONTRIBUTING TO UNSTABILITY
INCOMPATIBILITY (MATERIALS TO AVOID)
HAZARDOUS DECOMPOSITION PRODUCTS

None
Acids and fumes
When heated to decomposition, it
Emits toxic fumes of Fluorine and
Magnesium oxide

HAZARDOUD POLYMERZATION
CONDITIONS TO AVOID

Will Not Occur
Heat, incompatible materials



MAGNESIUM FLUORIDE MATERIAL SAFETY DATA SHEET

SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **wear a self-contained breathing apparatus and full protective clothing. Isolate the area where the spill occurred and insure that proper ventilation is available. Vacuum up spill using a high efficiency unit and place in a container for proper disposal. Take care not raise dust.**

WASTE DISPOSAL METHOD:

Consult federal, state and local regulations for proper disposal.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	Wear NIOSH-approved dust-mist-fume cartridge respirator
LOCAL EXHAUST	Maintain exposure below TLV/PEL
MECHANICAL (general)	Recommended
SPECIAL	Nonr
OTHER	NA
PROTECTIVE GLOVES	Impervious Gloves
EYE PROTECTION	Safety glasses with side shields

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly after handling and before eating.

TRANSPORTATION REQUIREMENTS	DOT CLASS:	Not Classified
	UN NUMBER:	NC
	IMCO CLASS:	NC
	OTHER:	ND

PRECAUTIONARY LABELING **NONE**

THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

NA= NOT APPLICABLE

ND= NO DATA FOUND



OTHER EFFECTS OF OVEREXPOSURE:

The inhalation of fumes of freshly sublimed magnesium oxide may cause metal fume fever. There is no evidence that magnesium produces true systemic poisoning. Particles of metallic magnesium or magnesium alloy which perforate the skin or gain entry through cuts and scratches may produce a severe local lesion characterized by the evolution of gas and acute inflammatory reaction, frequently with necrosis. The condition has been called a "chemical gas gangrene." Gaseous blebs may develop within 24 hours of the injury. The inflammatory response is marked at the site of injury and there may be signs of lymphagitis. The lesion is very slow to heal.

The toxicity of magnesium compounds is usually that of the anion.

Inorganic fluorides are generally highly irritating and toxic. Acute effects resulting from exposure to fluorine compounds are due to hydrogen fluoride, chronic fluorine poisoning, or "fluorosis," occurs among miners of cryolite, and consists of a sclerosis of the bones, caused by fixation of the calcium by the fluorine. These may also be some calcification of the ligaments. The teeth are mottled, and there is osteosclerosis and ostemalacia. Large doses can cause very severe nausea, vomiting, diarrhea, abdominal burning and cramp-like pains. Can cause severe bone changes, making normal movements painful. Some enzyme systems effects are reported. Also loss of weight, anorexia, anemia, wasting and cachexia, and dental defects are among the common findings in chronic fluorine poisoning. There may be an eosinophilia, and impairment of growth in young workers. Symptoms of intoxication include gastric, intestinal, circulatory, respiratory and nervous complaints and skin rashes. Common air contaminants.