

MATERIAL SAFETY DATA SHEET

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MATERIAL IDENTIFICATION "XENOLITE" ETHYLENE COPOLYMER RESIN "B-E" Series 600

MSDS NUMBER NUMBER

XENOLITE "B-E" Series 600

"XENOLITE" is a registered trademark of Lite Tech, Inc.

MANUFACTURER

Lite Tech, Inc.
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PHONE NUMBER

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CHEMICAL FAMILY: Filled Polymer Composition

TRADE NAMES / SYNONYMS: XENOLITE "B-E" Series 600

TSCA INVENTORY STATUS: All components listed

WHMIS: This is a WHMIS controlled product, Class D2A

COMPONENTS

Material	CAS NUMBER
ETHYLENE COPOLYMER	26221-73-8
ANTIMONY*	7440-36-0
LEAD (oiled)*	7439-92-1
TUNGSTEN	7440-33-7
BARYTES/BARIUM SULFATE	7727-43-7
ANTIOXIDANT	6683-19-8
ANTIOXIDANT	31570-04-4
HYDROCARBON OIL	64742-01-4
OLEAMIDE (Slip Agent)	301-02-0

* Regulated as a Toxic Chemical under SECTION 313 of Title III of the SARA Act of 1986 and 40 CFR part 372

Antimony, lead, tungsten and barytes powders bound in a thermoplastic polymer do not present a toxicity hazard unless the compound is ground to a powder and inhaled.

PHYSICAL DATA

Melting Point	: 79 C
%Volatiles	: Negligible
Water Solubility	: Negligible
Odor	: None
Form	: Solid Pellets or Sheet/Rolls
Specific Gravity	: 3.00

HAZARDOUS REACTIVITY

Instability
Decomposition

Stable at normal temperatures and storage conditions
Decomposes with heat.

FIRE AND EXPLOSION DATA

FLASH POINT

Not available

FIRE AND EXPLOSION HAZARDS

Solid polymer compound can be combusted only with difficulty

Hazardous gases/vapors produced in fire: carbon monoxide, carbon dioxide, antimony, and lead

EXTINGUISHING MEDIA

Water. Foam. Dry Chemical. C02

SPECIAL FIRE FIGHTING INSTRUCTIONS

Keep personnel removed and upwind of a fire. Wear self-contained breathing apparatus.

HEALTH HAZARD INFORMATION**ETHYLENE COPOLYMER**

INGESTION The oral LD-50 in rats using one type of ethylene copolymer is in excess of 1000 mg/kg of body weight. Two-week metabolic tests with dogs and rats showed no significant amount of polymer was retained by the animals. Two types of ethylene copolymer were fed to rats for 90 days at the 5 and 10% level in the diet. No gross pathological changes were found. Ethylene copolymer resins have low toxicity

SKIN No data is available. However, based on experience with handling these polymers, no unusual dermatitis hazard is expected from routine handling. Molten polymer contacting the skin will cause thermal burns.

EYE Mechanical irritation

INHALATION Polymer/compound are not respirable as marketed. At processing temperatures above 204 C, fumes irritating to the eyes, nose, and throat may be produced. Exposure may result in redness, tearing and itching in the eyes together with soreness in the nose and throat with coughing.

CHRONIC EFFECTS No compound related effects were seen at the 50-ppm level.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known

None of the compounds present in the polymer at concentrations > 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

ANTIMONY

INGESTION Single ingestion exposure in animals resulted in no weight gain for many days after exposure. Repeated exposure of animals by ingestion caused reduced weight gain and alterations of blood parameters. Reports are vague on the nature of the antimony exposures, but repeated and long-term exposures caused injury to heart muscles.

In ACUTE toxicity testing in animals, antimony compounds were of slight toxicity by ingestion. Ingestion may cause nausea, vomiting and severe diarrhea. Inflammation of the kidneys and liver with bleeding may occur. No animal test reports are available to define carcinogenic, mutagenic, developmental, or reproductive hazards.

SKIN / EYE In powder form, it is a skin, eye, nose, and throat irritant. It can cause allergic skin rashes. It is untested for animal sensitization.

INHALATION Compound is not respirable as marketed unless ground. Prolonged or chronic exposure to the antimony powder fume or dust may cause skin pustules, bleeding gums, conjunctivitis, laryngitis, headache, weight loss, anemia, pain or tightness in the chest, shortness of breath, metallic taste, and decreased sense of smell.

CHRONIC EFFECTS Studies involving antimony and its compounds have shown a causal link between antimony exposure and increased levels of throat and lung cancer among workers and animals. While it appears that antimony compounds may be more highly toxic, this material should be treated as a suspected carcinogen. Studies involving animals and humans have shown that chronic high exposure may lead to teratogenic effects.

ANIMAL DATA:

Inhalation LC50	No information found
Skin absorption LD50	No information found
Oral LD50	7000 mg/kg in rats (very low toxicity by ingestion)

HYDROCARBON OIL

INGESTION Hydrocarbon lubricating oils have low to moderate oral toxicity, with overexposure. Vomiting due to irritation of the digestive tract is common. Keep the airway clear. This product is not considered a carcinogen or to have reproductive effects by IARC, NTP and ACGIH. Oral LD50 > 15,000 mg/kg in rats.

SKIN / EYE May cause eye irritation. Prolonged or repeated skin exposure to liquid may cause dry skin, irritation, and acne.

INHALATION Not sufficiently volatile to present a hazard from vapor inhalation under normal use. High temperatures may cause symptoms of respiratory tract irritation.

TUNGSTEN

INGESTION No particular hazard identified. Not listed as a carcinogen by IARC, NTP or OSHA. Not reported as a mutagen or with genetic effects. An experimental teratogen.

SKIN / EYE In powder form, dust may irritate the skin and the eyes, with possible corneal abrasion.

INHALATION Compound is not respirable as marketed. In powder form breathing dust may irritate the respiratory tract and cause coughing. Extreme or repeated exposure may cause lung damage.

CHRONIC EFFECTS: None reported

ACUTE TOXICITY Animal data. Oral-rat TDLo: 1210 ug/kg (35W pre) TER eye-rabbit 500 mg/24H MLD

LEAD

INGESTION Ingestion is a main route to lead intoxication. Lead is a carcinogen and reproductive toxin. Recommended to keep blood-lead levels < 35 ug/dL.

SKIN / EYE In powder form, dust may irritate the skin and the eyes.

INHALATION Compound is not respirable as marketed. In powder form breathing dust may irritate the respiratory tract and cause coughing. Extreme or repeated exposure may cause lung damage and other toxic health effects. No immediate effects from dust or fumes.

CHRONIC EFFECTS Symptoms of acute overexposure develop slowly and may affect the following target organs or body streams, blood, digestive, nervous, renal, and reproductive. Signs and symptoms may include anemia, abdominal cramps, diarrhea, constipation, nausea, vomiting, weakness, decreased sperm count and libido, reticulocytosis. Higher exposures may lead to toxic encephalopathy, with irritability, confusion or coma or peripheral neuropathy with muscle weakness.

MEDICAL CONDITIONS AGGRAVATED BY LEAD. Diseases of the blood, bone marrow or kidneys. Women of childbearing age are warned that lead is a reproductive toxin.

EXPOSURE LIMITS

"XENOLITE" B-E ETHYLENE CO POLYMER RESIN

TLV (ACGIH)	Not Applicable
PEL (OSHA)	Not applicable

OTHER APPLICABLE EXPOSURE LIMITS

ANTIMONY

TLV (ACGIH)	0.5 mg/ cu m, as Sb
PEL (OSHA)	0.5 mg/ cu m- 8 hr. TWA- Total dust

TUNGSTEN

TLV (ACGIH)	5 mg/ cu m, TWA, as insoluble W
	10 mg/ cu m STEL as insoluble W
PEL (OSHA)	5 mg/ cu m, as W, NIOSH TWA
	5 mg/ cu m respirable dust (PNOR)
	10 mg/ cu m total dust (PNOR)

LEAD

TLV (ACGIH)	0.15 mg/ cum, as Pb Inorg dust/fumes
PEL (OSHA)	0.05 mg/ cu m, as Pb

HYDROCARBON OIL

TLV (ACGIH)

10 mg/ cum

PEL (OSHA)

5 mg/ cum

SAFETY PRECAUTIONS

Avoid breathing dust during compounding or if compound ground.
See FIRST AID and PROTECTION INFORMATION sections.

FIRST AID

INHALATION

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion move to fresh air.

SKIN CONTACT

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable. If molten polymer gets on the skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical treatment for thermal burn. In case of contact, wash skin with soap and water

EYE CONTACT

In case of contact, immediately flush the eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

No specific intervention is indicated as compound is not likely to be ingested. Consult a physician, if necessary.

PROTECTION INFORMATION

GENERALLY APPLICABLE CONTROL MEASURES AND PRECAUTIONS

Use only with adequate ventilation. Avoid dust generation.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when the possibility exists for eye and face contact with molten material.

RESPIRATORS

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge with dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is

any potential for an uncontrolled release, or exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. During grinding, sanding or sawing operations, use a NIOSH/MSHA approved air purifying respirator with dust/mist cartridge or canister if airborne particulate concentrations are expected to exceed permissible exposure levels.

PROTECTIVE CLOTHING

If there is potential contact with hot/molten polymer, wear heat resistant clothing, gloves, and footwear. Wear leather or cotton gloves when sawing routing, drilling, or sanding.

DISPOSAL INFORMATION

AQUATIC TOXICITY

Negligible solubility.

SPILL, LEAK OR RELEASE

Use appropriate personal protective equipment during clean up. Recover undamaged and minimally contaminated material for reuse or reclamation. Shovel or sweep up.

WASTE DISPOSAL

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery and with metal fume scrubbing. Landfilling may be prohibited due to toxic lead leachate levels. Lead is listed under RCRA /EPA leachate controls, and TLCP tests indicate excess lead levels. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state, and local regulations.

SHIPPING & STORAGE INFORMATION

SHIPPING- DOT/TOG:

Not Regulated. No proper shipping name.

STORAGE:

Store in a cool place. Keep containers closed

ADDITIONAL INFORMATION & REFERENCES

NA = Not applicable

NE = Not Established

STATE RIGHT-TO-KNOW LAWS

No substance on the state hazardous substances list, for the states indicated below, are used in the manufacture of the products on this MSDS sheet, with the exceptions listed.

PENNSYLVANIA

Hazardous substances at a concentration of >1%

Special Hazardous substances > 0.01%

Non-hazardous listed if > 3%

Lead, Antimony

Hydrocarbon oil

see page 1

CALIFORNIA WARNING

The information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate to the best of our knowledge and belief but is not guaranteed to be so.