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MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

COMPOSITION Y	PRODUCT NAME Yttrium
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Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
Y	7440-65-5	0.0-100.0%	1mg/m3	1mg/m3

Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR Gray-black pieces, no odor Darkens on exposure to light
MELTING POINT (BASE METAL) 1500.00°C to 1522.00°C	SPECIFIC GRAVITY 4.47gm/cc

Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) N/A	Flammable Limits Non Flammable	LEL N/A	UEL N/A
EXTINGUISHING MEDIA Use: Class D or other metal extinguishing agent. Use suitable extinguishing media for surrounding materials & type of fire. DO NOT USE WATER.			
SPECIAL FIRED FIGHTING PROCEDURES 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 Flammable in the form of dust when reacted with air or halogens. Oxidizes on heating in air or oxygen.			

Section 5- REACTIVITY DATA	
STABILITY Stable	INCOMPATABILITY (MATERIALS TO AVOID) Strong acids and bases; strong oxidizing agents; air and light sensitive; moisture sensitive; reacts violently with halogens
CONDITIONS TO AVOID None	
HAZARDOUS DECOMPOSITION PRODUCTS Oxides of yttrium	

Section 6- HEALTH HAZARD GUIDE
MAJOR EXPOSURE HAZARD <input type="checkbox"/> Inhalation <input type="checkbox"/> Skin <input type="checkbox"/> Skin Absorption <input type="checkbox"/> Eye Contact <input type="checkbox"/> Ingestion
EFFECTS OF OVEREXPOSURE To the best of our knowledge the chemical, physical and toxicological properties of Yttrium metal have not been thoroughly investigated and recorded. Yttrium is considered a rare earth metal. These metals are moderately to highly toxic. The symptoms of toxicity of the rare earth elements include writhing, ataxia, labored respiration, walking on the toes with arched back and sedation. The rare earth elements exhibit low toxicity by ingestion exposure. However, the intraperitoneal route is highly toxic while the subcutaneous route is poison to moderately toxic. The production of skin and lung granulomas, after exposure to them requires extensive protection to prevent such exposure. (Sax, Dangerous Properties of Industrial Materials, eighth edition) INHALATION: ACUTE: May cause irritation to the respiratory tract and mucous membranes. Dusts may cause asthma attacks and lung damage such as lung granulomas. CHRONIC: Prolonged or repeated inhalation may cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension, fibrosis and cardiovascular collapse. SIGNS & SYMPTOMS: May cause writhing, ataxia, labored respiration, walking on the toes with arched back and sedation. INGESTION: ACUTE: May cause gastrointestinal irritation. CHRONIC: May affect the coagulation rate of the blood. SIGNS & SYMPTOMS: May cause nausea, vomiting, diarrhea, abdominal burning and cramp-like pain. SKIN: ACUTE: May cause irritation. CHRONIC: No chronic health effects recorded. SIGNS & SYMPTOMS: May cause redness and itching. EYE: ACUTE: May cause irritation. CHRONIC: No chronic health effects recorded. SIGNS & SYMPTOMS: May cause redness, itching and watering. TARGET ORGANS: May affect respiratory system, blood, eyes and skin. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing respiratory disorders. CARCINOGENICITY: NTP? No IARC Monographs? No OSHA Regulated? No
EMERGENCY & FIRST AID PROCEDURES INHALATION: Remove from exposed area to fresh air immediately, keep warm and quiet and give oxygen if breathing is difficult. Seek medical attention. EYE CONTACT: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if irritation persists. INGESTION: Give 1-2 glasses of milk or water and induce vomiting. Seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person. SKIN CONTACT: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water. Seek medical attention if irritation persists.

Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCUDRES

Wear a self-contained breathing apparatus and full protective clothing. Isolate the area of the spill and insure proper ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Do not raise dust during clean up.

WASTE DISPOSAL METHODS

Dispose of in accordance with applicable Federal, State & Local regulations.

Section 8- SPECIAL PROTECTION

RESPIRATORY

Wear NIOSH approved dust respirator.

VENTILATION

Local exhaust ventilation may be necessary to control any air contaminants to within their PELs or TLVs during the use of this product. Good general ventilation is recommended.

EYE PROTECTION & PROTECTIVE CLOTHING

Wear safety glasses; neoprene gloves and protective clothing to prevent contamination of skin and clothes.

Section 9- SPECIAL PRECAUTIONS

Store in tightly sealed container in a cool, dry area. Wash thoroughly after handling and before eating. STORE AWAY FROM LIGHT.

WORK/HYGIENIC/MAINTENANCE PRACTICES: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

DOT Hazard Label: Dangerous When Wet
UN/NA Number: 3078

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