



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

DATE OF LAST REVISION: 05-23-96

CHEMICAL IDENTITY

LABEL IDENTITY	YTTRIUM OXIDE
CHEMICAL NAME/SYNONYMS	YTTRIA
FORMULA	Y2O3
CHEMICAL FAMILY	METAL OXIDE
MOLECULAR WEIGHT	225.807
CHEMICAL ABS NUMBER	1314-36-9
HAZARDOUS INGREDIENTS	YTTRIUM OXIDE
%: 100 TLV: 1 mg/m3 (as Y)	OSHA/PEL: 1 mg/m3 (as Y)

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	White solid or powder, no odor
BOILING POINT	ND
DENSITY (gm/cc)	5.01
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H2O=1)	NA
SOLUBILITY IN WATER	0.18mg/100mg @ 29° C
MELTING POINT	2410 melting
SPECIFIC GRAVITY	ND
OTHER	Soluble in acid

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (°C)	NA
FLAMMABILITY	Non-flammable
EXTINGUISHING MEDIA	Use dry chemical, CO₂.
SPECIAL FIRE FIGHTING PROCEDURES	Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.
UNUSUAL FIRE & EXPLOSION HAZARDS	Material may generate toxic fumes if involved in a fire.

HEALTH HAZARD INFORMATION

TOXICITY DATA ior-rat LD50: 500mg/kg

HMIS RATING:

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



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ROUTES OF ENTRY	INHALATION:	Yes
	SKIN:	Yes
	INGESTION:	NA

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory Disorders**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **Coughing and sneezing. May cause pulmonary fibrosis with external chronic pressure.**

DERMAL/EYE: **Mechanical irritant.**

OTHER: **Symptoms of acute lanthanide toxicity in rats are immediate defecation, writhing ataxia, destion, labored reparation and reduced activity. Death is mainly due to respiratory and cardiac failure. Chronic lanthanide intoxication causes renal and hepatic derangement and increases coagulation time. Lanthanide's target the liver, causing fatty liver degeneration and a decrease in liver glycogen and blood glucose levels.**

ADDITIONAL: **Not considered and industrial toxin. As a rare earth, may have anticoagulant effects on the blood. *SEE ABOVE***

CONDITIONS AGGRAVATED BY EXPOSURE: **RESPIRATORY DISORDERS**

CARCINOGENICITY: **None** NTP: **No** IARC MONOGRAPHS: **NO** OSHA REGULATE: **NO**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Administer 1-2 cups of water and induce vomiting, seek medical attention.**

INHALATION: **Remove to fresh air & give oxygen, seek medical attention.**

SKIN CONTACT: **Wash affected area with soap and water, seek medical attention**

EYE CONTACT: **Flush eyes for at least 15 minutes with lukewarm water, seek medical.**

UNDER ALL ABOVE EMERGENCY CONDITIONS SEEK MEDICAL ATTENTION

REACTIVITY DATA

STABILITY	Stable
CONDITIONS CONTRIBUTING TO UNSTABILITY	None
INCOMPATIBILITY (MATERIALS TO AVOID)	Strong acids, strong bases
HAZARDOUS DECOMPOSITION PRODUCTS	None
HAZARDOUD POLYMERZATION	Will Not Occur
CONDITIONS TO AVOID	Incompatible materials

SAFE HANDLING AND USE

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

Wear self-contained breathing apparatus and full protective clothing, vacuum spill and place in container for proper disposal. Isolate area where spill occurred and insure proper ventilation is available. Take care not to raise dust.



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WASTE DISPOSAL METHOD:

Consult federal, state and local regulations for proper disposal.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	NIOSH approved dust-mist-fume respirator
LOCAL EXHAUST	Maintain below TLV
MECHANICAL (general)	Recommended
PROTECTIVE GLOVES	Neoprene
EYE PROTECTION	Safety goggles
OTHER PROTECTIVE EQUIPMENT	Wear protective clothing to prevent contamination of skin and clothes

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Store in tightly closed container, store away from heat and incompatible materials, wash hands and face thoroughly after handling and before meals.

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

PRECAUTIONARY LABELING NONE

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NA= NOT APPLICABLE

ND= NO DATA FOUND