



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

DATE OF LAST REVISION: 01-15-08

CHEMICAL IDENTITY

LABEL IDENTITY	BISMUTH LANTHANUM TITANIUM OXIDE
FORMULA	BiLaTiO₃
CHEMICAL FAMILY	BISMUTH LANTHANUM TITANIUM OXIDE
HAZARDOUS INGREDIENTS	NONE LISTED

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Odorless, white powder
BOILING POINT	ND
VAPOR DENSITY	No information
VAPOR PRESSURE	No information
% VOLATILE BY VOLUME (%)	NA
SPECIFIC GRAVITY	ND
EVAPORATION RATE (H ₂ O=1)	NA
SOLUBILITY IN WATER	Mineral acids

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	None
FLAMMABLE LIMITS	Non-flammable
EXTINGUISHING MEDIA	Use suitable means for extinguishing surrounding fire
SPECIAL FIRE FIGHTING PROCEDURES	Use full protective clothing and NIOSH approved self-contained breathing apparatus
UNUSUAL FIRE & EXPLOSION HAZARDS	None

HEALTH HAZARD INFORMATION

TOXICITY DATA

	<u>(%)</u>	<u>Oral Toxicity (LD50)</u>	<u>OSHA PEL</u>	<u>TLV</u>	<u>Carcinogen</u>
BiO ₃	67.7	5.0 g/Kg	NE	NE	No
La ₂ O ₃	10.9	NR	NE	NE	No
TiO ₂	21.4	NL	10.0 mg/m ³	10.0 mg/m ³	NIOSH-X

EFFECTS OF OVEREXPOSURE (acute and chronic):
R&D material, effects not established.



BISMUTH LANTHANUM TITANIUM OXIDE MATERIAL SAFETY DATA SHEET

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

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Seek immediate medical attention.**

INHALATION: **Remove to fresh air.**

SKIN CONTACT: **Wash thoroughly with soap and water.**

Seek immediate medical attention in all cases.

REACTIVITY DATA

STABILITY	Stable
CONDITIONS TO AVOID	Damp and hot
INCOMPATIBILITY (MATERIALS TO AVOID)	Mineral acids
HAZARDOUS DECOMPOSITION PRODUCTS	None
HAZARDOUS POLYMERIZATION	None

SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Pick up and place in a Suitable container for reclamation or disposal in a method that does not generate dust.**

WASTE DISPOSAL METHOD: **Dispose of in accordance with local, state and federal regulations.**

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	NIOSH Approved
LOCAL EXHAUST	Preferred
OTHER	Lab coat or apron, gloves and safety glasses

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Keep in tightly closed container, store in cool dry ventilated area, isolate from incompatible substances.

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

NC = NOT CLASSIFIED

NL=NOT LISTED