



Date of Issue: 7/14/09

Nanomyte™ BE-15

Material Safety Datasheet

Identity / Ingredients Information	
MSDS Serial #:	A0009
Chemical name & composition:	Lithium Titanate, $\text{Li}_4\text{Ti}_5\text{O}_{12}$
Chemical family:	Metal Titanate
CAS Number:	12031-82-2
EINECS Number:	No data
OSHA PEL:	No data
ACGIH TLV:	No data
Proprietary:	YES

Physical / Chemical Characteristics	
Appearance and Odor:	White powder, no odor
Melting Point/Melting range:	No data
Boiling Point/Boiling range:	No data
Sublimation temperature / start:	Not determined
Vapor Pressure:	Not determined
Density at 20°C:	Not determined
Solubility In/Miscibility with Water at 29°C:	Insoluble

Fire and Explosion Hazard Data	
Flash Point:	Not applicable
Lower Explosive Limit:	Not determined
Upper Explosive Limit:	Not determined
Danger of Explosion:	Product does not present an explosion hazard.
Suitable Extinguishing Agents:	Use fire fighting measures that suit the surrounding fire.
Ignition Temperature:	Not determined
Unsuitable extinguishing agents:	None
Fire fighting protective equipment:	Wear self-contained respirator. Wear fully protective impervious suit.

Reactivity Data	
Decomposition temperature:	Not determined
Thermal Decomposition/Conditions to Avoided:	None
Materials To Avoid:	None
Dangerous reactions:	None
Dangerous Products of Decomposition:	None

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Material Safety Datasheet (continued)

Health Hazard Data	
Toxicological Information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
ACGIH A4:	Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
Primary irritant effect on the skin:	Irritant to skin and mucous membranes.
Primary irritant effect on the eye:	Irritating effect
Inhalation Effect:	May be irritating to the nose, mucous membranes and respiratory system
Ingestion Effect:	Ingestion may lead to dizziness, abdominal cramps, vomiting, bloody diarrhea, weakness and convulsions

Precautions for Safe Handling and Use	
After inhalation:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.
Safe Handling:	Ensure good ventilation at the workplace. Prevent formation of dust.
Storage Requirements to be met by Storerooms and Receptacles:	Storage should be cool and dry.
Further Information about Storage Conditions:	Keep container tightly sealed. Store in cool, dry place in tightly closed containers.

Accidental Release Measures	
Person-Related Safety Precautions:	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.
Measures for Environmental Protection:	Do not allow material to be released to the environment without proper governmental permits.
Measures for Cleaning/Collecting:	Dispose contaminated material as waste according to section on disposal data. Ensure adequate ventilation

First Aid Measures	
After Inhalation:	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice.
After Skin Contact:	Immediately wash with water and soap and rinse thoroughly. Seek immediate medical advice.
After Eye Contact:	Rinse opened eye for several minutes under running water. Then consult a doctor.
After Swallowing:	Seek immediate medical advice.
The Following Symptoms May Occur:	Gastric or intestinal disorders; coughing; breathing difficulty

Ecological Information
Do not allow material to be released to the environment without proper governmental permits.

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Material Safety Datasheet (continued)

Exposure Controls and Personal Protection	
Information about Design of Technical Systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
General Protective and Hygienic Measures:	The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work.
Breathing Equipment:	Use suitable respirator when high concentrations are present.
Protection of Hands:	Impervious gloves
Eye Protection:	Safety glasses
Body Protection:	Protective work clothing.

Transportation Data	
Transport Information:	Not a hazardous material for transportation
Hazard class:	None
ADR/RID class:	None
IMDG Class:	None
Transport Additional Information:	Not dangerous according to the above specifications.

Disposal Data	
Disposal Recommendations - Product:	Consult state, local or national regulations for proper disposal.
Disposal Recommendations - Unclean Packaging:	Disposal must be made according to official regulations.

Regulations	
Hazard Symbols:	Xn Harmful
Risk Phrases:	20 - harmful by inhalation; 37 - irritating to respiratory system.
Safety Phrases:	22 - do not breathe dust; 36 - wear suitable protective clothing; 38 - in case of insufficient ventilation, wear suitable respiratory equipment.
Limitation of Use:	For use only by technically qualified individuals.
Other Information:	Employers should use this information only as a supplement to other information gathered by them and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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