LBT
Laser Bonding Technology

SAFETY DATA SHEET

Revision Date: 15 Mar 2024

1 IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name : LBT100-LQ WATER BASED LASER MARKING MATERIAL

1.2 SUPPLIER/MANUFACTURER

Laser Bonding Technology
5336 Vincent Avenue
Los Angeles, CA 90041

1.3 EMERGENCY TELEPHONE NUMBER

CHEMTREC : 1 800 424 9300
(OUTSIDE US) : 1 703 527 3887
COMPANY : 1 844 577 7772

2 HAZARDS IDENTIFICATION

2.1 CLASSIFICATION

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

H319 Eye irritation	Category 2A
H335 Specific target organ toxicity (single exposure)	Category 3
H351 Carcinogenicity	Category 2

2.2 GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

GHS07 HARMFUL

GHS08 HEALTH HAZARD

Hazard statements

- H319 Causes serious eye irritation
- H335 May cause respiratory irritation
- H351 Suspected of causing cancer

Precautionary Statements - Prevention

- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P264 Wash face, hands and any exposed skin thoroughly after handling
- P271 Use only outdoors or in a well-ventilated area
- P281 Use personal protective equipment as required
- P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P308 + P313 IF exposed or concerned: Get medical advice/attention
- P337 + P313 If eye irritation persists: Get medical advice/attention
- P403 + P233 Store in a well-ventilated place. Keep container tightly closed
- P405 Store locked up
- P501 Dispose of contents/container to an approved waste disposal plant

2.3 HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS

- Causes mild skin irritation

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS. No.	Weight - %
Water	7732-18-5	50 - 60
Proprietary Hydrated Aluminum Molybdenum Silicate Mineral	N/A	50 - 60

The exact percentage (concentration) of composition has been withheld as a trade secret (29 CFR 1910.1200)

4 FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

General Advice
Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.

Eye Contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. If symptoms persist, call a physician.

Skin Contact
Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Ingestion
Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Call a physician.

Inhalation
Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

Self-Protection of the First Aider
Remove all sources of ignition. Use personal protective equipment as required.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACCUTE AND DELAYED
The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED
No information available.

5 FIRE-FIGHTING MEASURES

5.1 SUITABLE EXTINGUISHING MEDIA
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA
Use of water spray when fighting fire may be inefficient.

5.2 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL
Flash back possible over considerable distance. Extremely flammable.

5.3 EXPLOSION DATA
Sensitivity to Mechanical Impact : **NONE**
Sensitivity to Static Discharge : **NONE**

5.4 PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS
In the event of fire and/or explosion do not breathe fumes. Use self-contained breathing apparatus if necessary.

6 - ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES
No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

6.2 ENVIRONMENTAL PRECAUTIONS
Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Soak up with inert absorbent material.

7 - HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store away from direct sunlight in dry conditions. Keep in properly labeled containers. Keep in an area equipped with sprinklers. Keep containers tightly closed in a cool, well-ventilated place.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Proprietary Hydrated Aluminum Molybdenum Silicate Mineral	N/A	N/A	N/A

8.2 EXPOSURE CONTROLS

Appropriate engineering controls

Showers, eyewash stations, ventilation systems.

Eye/face protection
Wear safety glasses with side shields (or goggles). Tight sealing safety goggles. Face protection shield.

Skin and body protection
No special technical protective measures are necessary.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9 - PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Semi-liquid paste
Color	Dark Gray or Black

OTHER INFORMATION	**VALUES**
Softening point	No information available
Molecular weight	No information available
VOC content	No information available
Density	No information available
Bulk density	No information available
Percent solids by weight	No information available
Percent volatile by weight	No information available
Percent solids by volume	No information available
Actual VOC (lbs/gal)	No information available
Actual (grams/liter)	No information available
EPA VOC (lbs/gal)	No information available
EPA VOC (grams/liter)	No information available
EPA VOC (lb/gal solids)	No information available

PROPERTY	**VALUES**
pH	6.9 6.9'[Conc.(% w/w):10%]
Melting point/freezing point	No information available
Boiling point/boiling range	No information available
Flash point	Product is not combustible
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	No information available
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific Gravity	No information available
Water solubility	Slightly
Sollubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Dynamic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Odor	No information available
Odor threshold	

10 - STABILITY AND REACTIVITY

10.1 REACTIVITY
Non-reactive

10.2 CHEMICAL STABILITY
Stable under recommended storage conditions.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
None under normal processing.

10.4 CONDITIONS TO AVOID
No data available

10.5 INCOMPATIBLE MATERIALS
No data available

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
None known based on information supplied.

11 - TOXICOLIGICAL INFORMATION

11.1 TOXICOLOGICAL INFORMATION

Toxicological effects for the listed Proprietary Hydrated Aluminum Silicate Mineral haved not been tested but are expected to be similar to the related molybdenum trioxide CAS# 1313-27-5. The toxicological data for molydbenum trioxide is listed below and should be used as a guideline.

Acute toxicity
LD50 Oral - Rat - male - 2,689 mg/kg (OECD Test Guideline 401)
LD50 Oral - Rat - female - 3,830 mg/kg (OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h -> 5.05 mg/l (OECD Test Guideline 403)
LD50 Dermal - Rat - male and female -> 2,000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitisation
Maximisation Test - Guinea pig
Result: Does not cause skin sensitisation.
(OECD Test Guideline 406)

Germ cell mutagenicity
Ames test
S. typhimurium
Result: negative

Carcinogenicity
Limited eveidence of a carcinogenic effect.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

12 - ECOLOGICAL INFORMATION

12.1 ECOLOGICAL EFFECTS

Ecological effects for the listed Proprietary Hydrated Aluminum Silicate Mineral haved not been tested but are expected to be similar to the related molybdenum trioxide CAS# 1313-27-5. The ecological data for molydbenum trioxide is listed below and should be used as a guideline.

Toxicity
Molybdenum Trioxide is not hazardous to the aquatic environment as:

- The lowest acute reference values for fish, invertebrates and algae are > 100 mg Mo/L.
- The lowest aquatic NOEC for these three trophic levels is > 1 mg Mo/L
- There is no evidence for bioaccumulation or bio-magnification in the environment.

Persistence and degradability
No data available

Bioaccumulation potential
No data available

Mobility in soil
No data available

Results of PBT and vPvB assessment
The PBT and vPvB criteria of “Annex XIII to the Regulation” do not apply to inorganic substances. Therefore a PBT and vPvB assessment is not required.

Other adverse effects
no data available

13 - DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHOD

Product
Containers may still present a chemical hazard or danger when empty. Clean container sufficiently well to ensure that residuals do not remain or reuse container to store the same product, and otherwise puncture containers, to prevent re-use, and bury at an authorized landfill.

Other information
Before disposing, try to reuse or recylcing if possible. Where possible retain label warnings and SDS and observe all notices pertaining to the product. User should investigate reduction as a method. Do not allow wash water from cleaning or process equipment to enter drains. It may be necessary to collect all wash water for treatment before disposal. Disposal to a sewer may be subject to local laws and regulations and these should be considered first. Where in doubt contact the responsible authority. Observe all label safeguards until containers are cleaned and destroyed.

14 - TRANSPORTATION INFORMATION

UN number: Not Dangerous for Transport
UN proper shipping name: Not Dangerous for Transport
Transport hazard class: Not Dangerous for Transport
Packing group: Not Dangerous for Transport
Environmental hazards: Not Dangerous for Transport
Special precautions for user: Not Dangerous for Transport
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not Dangerous for Transport

15 - REGULATORY INFORMATION

15.1 INTERNATIONAL INVENTORIES

TSCA	Complies	**IECSC**	Complies*
DSL/NDSL	Complies*	**KECL**	Complies*
EINECS/ELINCS	Does not comply*	**PICCS**	Complies*
ENCS	Does not comply	**AICS**	Complies*

* This product contains an unknown chemical, therefore, this product's compliance to the inventory list is NOT DETERMINED

15.2 REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 11/312 Hazards
Acute health hazard, chronic health hazard

California Prop. 65 Components
This product contains Crystalline Silica, which is known to the State of California to cause cancer.

New Jersey / Massachusetts Right-to-Know Regulations
Crystalline Silica, Quartz, Mica, Kaolin Clay

Pennsylvania Right-to-Know Regulations
Kaolin Clay, Quartz

16 - OTHER INFORMATION

NFPA	**Health hazards** 2	**Flammability** 4	**Instability** 0	**Physical and Chemical Properties** *
HMIS	**Health hazards** 2 *	**Flammability** 4	**Physical hazards** 0	**Personal protection** X

*Chronic Hazard Star Legend * = Chronic Health Hazard*

Revision Date 15-Mar-2024
Revision Note
No information available

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

END OF SAFETY DATA SHEET