Lydall Performance Materials

SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name: LyTherm® Media (All grades are listed at the end of the MSDS)

Manufacturer: Lydall - Rochester
P.O. Box 1960
Rochester, NH 03866
Telephone Number: 1-603-332-4600/4605
Fax Number: 1-603-332-9602
Email: info@lydall.com

Product Use: Insulation and High Temperature Gaskets Applications

Date of Last Revision: February 12, 2009

SECTION 2 HAZARDS IDENTIFICATION

White, bonded fibrous web, odorless.

Emergency Overview: Product dust may be irritating to eyes, skin and respiratory system. Prolonged inhalation of respirable fibers may cause cancer. Prolonged inhalation of respirable fibers may cause cancer. Dust from "after service" material contains crystalline silica (cristobalite). Exposure to respirable crystalline silica may cause lung disease (silicosis) and cancer.

US OSHA Hazard Classification: Manufactured Article (Dust generated from processing - Hazardous (carcinogen, irritant, exposure limit)

EU Preparation Classification (1999/45/EC): Manufactured Article (Dust generated from processing – Carc Cat 2, Xi, R38, R49

Refer to Section 16 for Full Text of EU Classes and R Phrases

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Ingredient	CAS No./EINECS No.	Percent	EC Substance Classification (67/548/EEC)
Refractories, Fibers, Aluminosilicate	142844-00-6 / None Assigned	0-95%	Carc Cat 2, Xi R38, R49
Aluminum Oxide (fibrous) polycrystalline	1344-28-1 / 215-691-6	0-94%	Carc Cat 3, Xi, R38, R40
Special Purpose Glass Fiber Respirable Size	65997-17-3 / 266-046-0	0-10%	Carc Cat 3, Xi, R38, R40
Polymer Binder	Proprietary	0-15%	Not classified as dangerous

Refer to Section 16 for Full Text of EU Classes and R Phrases

SECTION 4 FIRST AID MEASURES

Eye Contact: Do not rub your eyes. Dust particles may cause abrasive eye injury. Flush eyes with water, holding the eyelids apart for several minutes. Get medical attention if irritation persists.
Skin Contact: Do not rub or scratch. Rinse exposed skin with cold water then wash skin with soap and water. Do not use hot water as that opens skin pores and may increase fiber penetration and irritation. Remove contaminated clothing and launder before re-use. Get medical attention if irritation persists.
Ingestion: If small quantities are swallowed, rinse out mouth with water. Drink plenty of water to help reduce irritation. If large amounts are swallowed or if irritation or discomfort occurs, get medical attention.
Inhalation: Remove victim to fresh air. Drink water to clear throat and blow nose to remove dust. Get medical attention if irritation persists.

SECTION 5 FIRE FIGHTING PROCEDURES

Extinguishing Media: Use water, water fog, carbon dioxide, foam or dry chemical.
Firefighting Procedures: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus for all fires involving chemical products.
Unusual Fire/Explosion Hazards: This product is not classified as flammable or combustible.
Hazardous Products of Combustion: Combustion of the product binder may generate oxides of carbon.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Wear appropriate protective clothing and equipment (see section 8). Pick up material and place into a container for disposal. If dust is present, wet down and collect in a manner to minimize the generation of airborne dusts or vacuum with a high efficiency vacuum cleaner.

Personal Precautions: Avoid contact with skin, eyes or clothing. Avoid breathing dust.

Environmental Precautions: None known.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin and clothing. Avoid creating airborne dusts. Do not breathe dust. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Do not eat, drink or smoke when using this material. Launder contaminated clothing before re-use. Wash thoroughly with soap and water after handling. Follow good housekeeping practices to keep surfaces, including areas overhead such as piping, drop ceilings, ductwork, etc. free from settled dust. Vacuum only using HEPA filtered equipment. Take special precautions when removing or handling this product after exposure to high temperatures.

Empty containers retain product residues and can be hazardous. Follow all MSDS precautions when handling empty containers.

Storage: Store in a dry, well ventilated area.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

Occupational Exposure Limits:

Refractories, Fibers, Aluminosilicate	5 mg/m3 (respirable) 15 mg/m3 (total dust) TWA OSHA PEL 0.2 f/cc TWA ACGIH TLV 0.5 f/cc TWA RCFC* recommended 1 fibre/mL TWA UK OEL 0.1 fibre.cm3 VME France 0.25 respirable fibers/mL Germany
Aluminum Oxide (fibrous) polycrystalline	5 mg/m3 (respirable) 15 mg/m3 (total dust) TWA OSHA PEL 0.5 f/cc TWA manufacturer recommended
Special Purpose Glass Fiber Respirable Size	5 mg/m3 (respirable) 15 mg/m3 (total dust) TWA OSHA PEL, 1 f/cc TWA OSHA HSPP** 1 f/cc TWA ACGIH TLV 5 mg/m3 or 2 fibre/mL TWA UK OEL 1 fibre.cm-3 VME France 0.25 respirable fibers/mL Germany
Polymer Binder (as particulates not otherwise classified)	5 mg/m3 (respirable) 15 mg/m3 (total dust) TWA OSHA PEL

* RCFC = Refractory Ceramic Fibers Coalition
** HSPP = OSHA voluntary Health and Safety Partnership Program
Note: If not listed above, refer to local regulations for specific country exposure limits

Engineering Controls: Use with adequate local exhaust ventilation to minimize exposures. Provide local exhaust ventilation where product is handled, cut or processed in a manner that generates dust.
Personal Protective Equipment:
Eye Protection: Wear safety glasses with side shields or dust proof goggles.
Skin Protection: Wear protective gloves to minimize skin contact. Barrier creams may be useful in reducing irritation.
Respiratory Protection: If the occupational exposure limits are exceeded or irritation is experienced, wear an approved particulate respirator. Selection of respiratory protection depends on the contaminant type, form and concentration. Select and use in accordance with all applicable regulations (in the US follow OSHA 1910.134) and good Industrial Hygiene practice.
Other Protective Clothing or Equipment: Clothing with long sleeves and pants should be worn to avoid skin contact. Washing facilities should be available in the work area. Work clothing should be laundered separately from normal clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White odorless bonded web.

Boiling Point: Not applicable	Melting Point: >700°C (glass fibre)
VOC Content: Not applicable	Specific Gravity: Not available
Solubility in Water: Insoluble	pH: Not applicable
Vapor Pressure (mmHg): Not applicable	Vapor Density: Not applicable
Evaporation Rate: Not applicable	Viscosity: Not applicable
% Volatile by Volume: 0%	Flashpoint: None
Flammable Limits in Air: Not applicable	Autoignition Temperature: Not applicable

SECTION 10 STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Avoid dust formation.
Incompatibility with Other Materials: Avoid strong acids.
Hazardous Decomposition Products: Thermal decomposition of polymer binder will generate oxides of carbon, fluorine, hydrogen fluoride and various hydrocarbons.
Hazardous Polymerization: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Potential Health Effects:
Eyes: Dust may cause mechanical irritation and possible injury.
Skin: Dust may cause mechanical irritation.
Ingestion: May cause irritation of the mouth and intestinal tract.
Inhalation: Dust may cause nose, throat and upper respiratory tract irritation. Symptoms include coughing, sneezing and scratchy throat.
Chronic Health Effects: Prolonged inhalation of respirable dust from this product may cause adverse effects on the lungs and is suspected to cause lung cancer. The University of Cincinnati is conducting an ongoing epidemiologic study of refractory ceramic fiber workers. To date they have seen no evidence of fibrotic lung disease. After this product has been in service at high temperatures (>1000ºC), ceramic fibers can be transformed into cristobalite, a crystalline form of silica. Exposure to respirable crystalline silica may cause a permanent, disabling, and sometimes fatal lung disease, silicosis and lung cancer. Inhalation of air with a very high concentration of respirable silica dust can cause the most serious forms of silicosis in a matter of months or a few years.
Carcinogenicity: Glass wool including special purpose glass fibers (respirable size) are classified by NTP as reasonably anticipated to be a carcinogen. IARC has classified special purpose glass fibers as group 2B, possibly carcinogenic to humans. ACGIH has classified special purpose glass fibers as A3, confirmed animal carcinogen with unknown relevance to humans. Mineral wool (special purpose glass fibres) is classified as a category 3 carcinogen in the EU Dangerous Substances Directive. OSHA has not classified special purpose glass fibers. Ceramic fibers (respirable size) is classified by NTP as reasonably anticipated to be a carcinogen. IARC has classified refractory ceramic fibers as group 2B, possibly carcinogenic to humans. Refractory ceramic fibres are classified as a category 2 carcinogen in the EU Dangerous Substances Directive. Both IARC and NTP have classified respirable crystalline silica as a known human carcinogen. ACGIH has classified refractory ceramic fibers and cristobalite as A2, suspected human carcinogens. OSHA has not classified ceramic fibers or crystalline silica. None of the other components is classified as a carcinogen by IARC, NTP, ACGIH or OSHA. None of the other components is classified as a carcinogen by IARC, NTP, ACGIH, OSHA or the EU Dangerous Substances Directive.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing skin and respiratory disorders may be at increased risk from exposure.

Acute Toxicity Data: No specific data is available

SECTION 12 ECOLOGICAL INFORMATION

No data available. This material is not expected to be toxic to plants or aquatic organisms.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose in accordance with national and local regulations.

SECTION 14 TRANSPORT INFORMATION

This material is not regulated as a hazardous material or dangerous good by US DOT, IMDG, IATA/ICAO, ADR/RID or TDG.

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

CERCLA: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA TITLE III:
Hazard Category For Section 311/312: This product is a manufactured article and not subject to reporting.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

Section 302 Extremely Hazardous Substances (TPQ): None

US Toxic Substances Control Act Inventory (TSCA): This product is an article and not subject to TSCA.

U.S. STATE REGULATIONS

California Proposition 65: This product contains special purpose glass fiber and ceramic fibers airborne particles of respirable size which is known to the State of California to cause cancer. This product may also contain trace amounts of formaldehyde which is known to the State of California to cause cancer:

INTERNATIONAL REGULATIONS:

EU Labeling: Finished product is an article and no labelling is required.

EU Chemical Inventory (EINECS)/REACH: This product is considered an article under EINECS and REACH.

RoHS (Restriction on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations): This product is RoHS compliant.

Australian Inventory of Chemical Substances: This product is an article and not subject to chemical notification requirements.

China Inventory of Existing Chemicals and Chemical Substances: This product is an article and not subject to chemical notification requirements.

Japanese Existing and New Chemical Substances: This product is an article and not subject to chemical notification requirements.

Korean Existing Chemicals List: This product is an article and not subject to chemical notification requirements.

Philippine Inventory of Chemicals and Chemical Substances: This product is an article and not subject to chemical notification requirements.

Canadian CEPA New Chemical Notification: This product is an article and not subject to new chemical notification.

Canadian WHMIS: If dust is generated in processing this dust would be classified as Class D-2-A (eye, skin and respiratory irritant, carcinogen)

New Zealand: This product is an article and not subject to new chemical notification.

SECTION 16 OTHER INFORMATION

Revision Date: February 12, 2009

Revision Note: New Format MSDS – all sections revised.

EU Classes and Risk Phrases for Reference (See Sections 2 and 3):
Carc Cat 2 Carcinogen Category 2
Carc Cat 3 Carcinogen Category 3
Xi Irritant
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R49 May cause cancer by inhalation

Disclaimer
The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

Grade List: 155, 167, 167-1, 196, 550-LF, 550-LJ, 880-LAH, 880-LFH, 880-LJH, 970-LA, 970-LAH, 970-LF, 970-LFH, 970-LJ, 970-LJH, 970-LK, 970-LKH, 971-LAH, 971-LFH, 1530-LA, 1530-LAR, 1530-LF, 1530-LJ, 1530-MI, 1535-GC, 1535-LK, 3000-LF, 3000-LFH, 3000-LJ, 3000-LJH, Rollboard 1/8, Rollboard 1/10 & Rollboard 1/16