Flexible Lining Systems
1-855-545-4900
9 E Loockerman Street
Dover,DE 19901

MATERIAL SAFETY DATA SHEET

Trade name: Flexible Lining Systems – SLPH-50-B

CHEMICAL FAMILY: Polyol Resin

TRANSPORTATION EMERGENCY ASSISTANCE / CALL CHEMTREC / 1 (800) 424 – 9300

MANUFACTURER: Flexible Lining Systems
9 E Loockerman St
Dover, DE
19901

NFPA HAZARD RATING

H	2
F	1
R	0
PP	0

DEGREE OF HAZARD: 4=EXTREME 3=HIGH 2=MODERATE 1=SLIGHT 0=INSIGNIFICANT

SECTION II (HAZARDOUS SUBSTANCES)

HAZARDOUS INGREDIENTS	CAS #	OSHA PEL	ACGIH TLV
Glycol	111-46-6	N/E	N/E
Glycol/EO/PO Polymer	9082-00-2	N/E	N/E
Glyceryl poly(oxypropylene) diamine	9046-10-0	N/E	N/E
Proprietary Blend	Not disclosed	N/E	N/E

* THIS CHEMICAL IS SUBJECT TO SARA TITLE III, SECTION 313 REPORTING

SECTION III (PHYSICAL DATA)

BOILING POINT: N/A WEIGHT PER GALLON: 9.41 +0.3 lbs.

% VOLATILE BY VOLUME: No data EVAPORATION RATE (ether=1): No data

VAPOR DENSITY (air=1): 8.5 approx. VAPOR PRESSURE: <0.0003 mmHG @ (20℃/68℉)

SECTION IV (HEALTH HAZARD DATA)

Health Hazards: Irritating to eyes, respiratory system and skin. Inhalation at levels above the occupational exposure

limit could cause respiratory sensitization. Risk of serious damage to respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons. Sensitized persons should not be exposed to any mixture containing unreacted MDI.

Physical Hazards: Reacts slowly with water to produce carbon dioxide, which may rupture closed containers. This reaction accelerates at higher temperatures.

General: Polymeric MDI:

Oral LD50 (rat) > 5,000 mg/kg

Dermal LD50 (rabbit) > 5,000 mg/kg

Inhalation LC50 (rat) > 490 mg/ m3/4 hour (respirable aerosol)

Inhalation: This product is a respiratory irritant and potential respiratory sensitizer. Inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization and lung injury. Symptoms may include irritation to the eyes, nose, throat, and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing and/or flu-like symptoms. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

Skin Contact: Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization. There is limited evidence from animal studies that skin contact may play a role in respiratory sensitization. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.
Eye Contact: The aerosol, vapor or liquid will irritate human eyes following contact.
Ingestion: Ingestion may cause irritation of the gastrointestinal tract. Based on the acute oral LD50, this product is considered practically non-toxic by ingestion.
Chronic Effects: A study was conducted where groups of rats were exposed for 6 hours a day, 5 days a week for a lifetime to atmospheres of respirable polymeric MDI aerosol either at concentrations of 0, 0.2, 1, 6 mg/m3. No adverse effects were observed at 0.2 mg/m3 concentrations. At the 1 mg/m3 concentrations, minimal nasal and lung irritant effects were seen. Only at the top concentration (6.0 mg/m3) there was an increased incidence of a beginning tumor of the lung (adenoma) and on malignant tumor (adenocarcinoma). Overall, the tumor incidence, both benign and malignant, and the number of animals with tumors were not different. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that a tumor formation will occur.
There are reports that excessive chronic exposure to diisocyanates may result in permanent decrease in lung function.
Carcinogenicity: The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.
Mutagenicity: There is no substantial evidence of mutagenic anticipated.
Reproductive Effects: No adverse reproductive effects are anticipated.

Teratogenicity & Fetotoxicity: No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations well in excess of the defined occupational limits.

SECTION V (First Aid Measures)

Flexible Lining Systems
1-855-545-4900
9 E Loockerman Street
Dover,DE 19901

First Aid Procedures

General: In case of accident or if you feel unwell, seek medical advice IMMEDIATELY (show the label where possible).

Inhalation: Remove patient from exposure, keep warm and at rest. Obtain medical attention. Treatment is symptomatic for primary irritation or difficulty in breathing. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breathing has ceased or shows signs of failing.

Skin Contact: Remove contaminated clothing. Wash affected areas thoroughly with soap and lukewarm water. If irritation, redness, or a burning sensation develops and persists, obtain medical advice. Contaminated clothing should be thoroughly cleaned before reuse.

Eye Contact: Immediately flush eyes with running water for a minimum of 15 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing eyes. Obtain medial attention IMMEDIATELY.

Ingestion: *Do not* induce vomiting. Provided the patient is conscious, wash out mouth with water, then give 1 or 2 glasses of water to drink. Refer person to medical personnel for immediate attention.

Note to Physician: Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

SECTION VI (REACTIVITY DATA)

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks, open flame and water contamination.

INCOMPATIBILITY: Water, alcohols, liquid chlorine, concentrated oxygen, NaOH, amines, alkaline materials and organometallic compounds.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce nitrogen oxides, hydrogen cyanide, carbon monoxide and/or carbon dioxide.

HAZARDOUS POLYMERIZATION: May occur at elevated temperatures in the presence of alkalies, tertiary amines and metal compounds.

SECTION VII (SPILL OR LEAK PROCEDURES)

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus. Cover spills with sawdust, vermiculite, or other absorbent material. Add an equal volume of a 6% ammonia solution in water and allow to react for 10 minutes. Collect into open containers and add more solution. Cover loosely to vent carbon dioxide gas generated.
WASTE DISPOSAL METHOD: Dispose in accordance with local, state, and federal regulations.

Flexible Lining Systems
1-855-545-4900
9 E Loockerman Street
Dover,DE 19901

SECTION VIII (SPECIAL PROTECTION INFORMATION)

RESPIRATION PROTECTION: Use organic vapor canister for low concentrations. Use self-contained breathing apparatus in enclosed areas involving higher vapor concentrations.

VENTILATION (Local/Mechanical Exhaust): Explosion proof mechanical equipment capable of keeping vapor concentration below the TLV.

PROTECTIVE GLOVES: Chemical resistant neoprene, nitrile-butadiene or butyl rubber gloves.

EYE PROTECTION: Safety goggles or face shield.

OTHER PROTECTIVE EQUIPMENT: Eye bath & safety shower should be available.

SECTION IX (SPECIAL PRECAUTIONS & TOXICOLOGICAL PROPERTIES)

Section X (Stability and Reactivity)

Stability: Stable under normal conditions.
Conditions to Avoid: Heat, high temperatures, open flame, sparks and moisture. Contact with incompatible materials in a closed system will cause buildup of pressure.
Incompatibility: Isocyanates and strong acids and oxidizers.
Hazardous Decomposition Products: Organic vapors and other thermal decomposition products.

Hazardous Polymerization: Will not occur.

Section XI – Toxological Information

Section XII – Ecological Information

Section XIII – Disposal Considerations

Disposal Method: Spill cleanup residues may still be subject to RCRA storage and disposal requirements. Dispose of in compliance with all relevant local, state, and federal laws and regulations regarding treatment.

Waste disposal of substance:
Incinerate in a licensed facility.
Do not discharge substance/product into sewer system.
Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

Section XIV – Transportation Information

Land transport
USDOT
Not classified as a dangerous good under transport regulations
Sea transport
IMDG

Flexible Lining Systems
1-855-545-4900
9 E Loockerman Street
Dover,DE 19901

Not classified as a dangerous good under transport regulations
Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

Section XV – National Regulations and References

USA CLASSIFICATION

OSHA Classification

Physical: Not Regulated

Health: Skin sensitizer. Irritant.

Target Organ: Skin. Central nervous system. Peripheral nervous system. Liver. Urinary tract. Gastrointestinal tract.

TSCA (Toxic Substance Control Act) Regulations: All ingredients are on the TSCA Chemical Inventory.

EPCRA Section 313 (40 CFR 372): This product does not contain any chemicals subject to reporting requirements.

This product does not contain nor is it manufactured with ozone depleting substances.

Other Regulation/Legislation Which Apply To This Product: Massachusetts Right-to-Know, Pennsylvania Right-to-Know, New Jersey Right-to-Know.

CANADIAN CLASSIFICATION
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

Controlled Products Regulations (WHMIS) Classification: D-2B: Irritant.
CEPA/Canadian Domestic Substance List (DSL): The substance(s) in this product is/are on the Canadian Domestic Substances List (CEPA DSL).

Section XVI – Disclaimer

Disclaimer: The data set forth in this sheet are based on information provided by the suppliers of the raw materials and chemicals used in the manufacture of the aforementioned product. Rhino Linings Corporation makes no warranty with respect to the accuracy of the information provided by their suppliers, and disclaims all liability of reliance thereof.