

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION:

Manufacturer Name: ESS-SL Adhesives, 388 River Bend Drive, Hiddenite, NC

Information Telephone: ESS (410)-878-6341

Medical Emergency Phone Number (24 Hours): 1-888-853-1758

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

Preparation Date: June 15, 2010

PRODUCT INFORMATION:

PRODUCT NUMBER: Turf Claw 75

PRODUCT DESCRIPTION: Polyurethane Adhesive

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

PHYSICAL STATE: Liquid

COLOR: Green

ODOR: Neutral

Eye and skin irritant. May cause allergic skin or respiratory reaction. Harmful if it is swallowed.

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY:

EYE: Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue.

SKIN: Can cause skin irritation; may cause sensitization.

INHALATION: Can cause minor respiratory irritation and possible wheezing and coughing due to pulmonary edema (fluid build-up in lungs). Product may cause allergic respiratory reaction. At room temperature, MDI vapors are minimal due to low vapor pressure. Heating or misting this product may generate high airborne concentrations. These may cause irritation or other adverse effects

INGESTION: Product is harmful if swallowed causing irritating to mouth, throat, and stomach.

LONG-TERM (CHRONIC) HEALTH EFFECTS

CHRONIC: May cause tumors based on tests with laboratory animals.

TARGET ORGAN(S): lungs and skin

REGULATED CARCINOGEN STATUS: Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease; Skin disease including eczema and sensitization; Persons with existing asthmatic conditions may experience difficulty breathing. Persons who have been sensitized to isocyanates may experience symptoms at very low exposure levels.

SECTION 3: COMPOSITION INFORMATION

Chemical Name: Methylene bisphenyl diisocyanate (MDI)

CAS #: 101-68-8

PERCENT: 10-20

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for exposure limit guidelines.

SECTION 4: FIRST AID MEASURES

EYES: Flush eyes with plenty of water; remove contact lenses if present, then continue to flush for at least 20 minutes. Obtain immediate medical attention preferably from an ophthalmologist.

SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Move to fresh air. If symptoms persist, call a physician or transport to medical facility.

Ingestion: Seek medical attention immediately. Do not induce vomiting. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal. Do not give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: > 204 C (400 F) estimated

AUTOIGNITION TEMPERATURE: Not established

LOWER & UPPER EXPLOSIVE LIMITS (% in air): Not established

EXTINGUISHING MEDIA: Water spray, foam, dry chemical, carbon dioxide

UNUSUAL FIRE AND EXPLOSION HAZARDS: Material will burn in a fire

SPECIAL FIRE FIGHTING INSTRUCTIONS: Persons exposed to combustion products should wear self-contained breathing apparatus and full Protective equipment

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, Carbon monoxide Nitrogen containing gases Hydrogen cyanide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: Exposure to spilled material may be irritating or harmful. Additional personal precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity and area in which the spill occurred.

CLEAN-UP: Dike if necessary, contain spill with inert absorbent. Keep spilled product out of sewers or water systems. Place in open topped container. Remove to well-ventilated area and treat with aqueous ammonia.

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: Harmful or irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. Local exhaust ventilation and air-supplied respiratory protection should be used when changing product containers at application temperature. Isocyanate levels should be monitored in application areas during use. Moisture contamination in closed containers may produce carbon dioxide gas pressure.

Storage: Store in cool and dry places.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses with side shields when handling this product. Additional eye protection is needed if eye contact with splashing or spraying liquid, or airborne material exist. Have an eye wash station available.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Use supplied-air respiratory equipment as required. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures

EXPOSURE LIMITS:

Chemical Name: Methylene bisphenyl diisocyanate (MDI)

ACGIH EXPOSURE LIMITS: 0.005 ppm TWA

OSHA PEL: 0.02 ppm Ceiling; 0.2 mg/m³ Ceiling

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

COLOR: Green

ODOR: Neutral

ODOR THRESHOLD: Not Established

WEIGHT PER GALLON (lbs.): 8

SPECIFIC GRAVITY: 1.3

SOLIDS (% by weight): 100

FLASH POINT: > 204 C (400 F) estimated

BOILING POINT (deg. C):

FREEZING/MELTING POINT (deg. C): Not established

VAPOR PRESSURE (mm Hg): Not established

VAPOR DENSITY: Not established

EVAPORATION RATE: Not established

OCTANOL/WATER COEFFICIENT: Not established

VOC, weight percent: Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY: stable under normal conditions

CHEMICAL INCOMPATIBILITY: water, alcohols, amines, strong acids & alkalis.

HAZARDOUS POLYMERIZATION: Will not occur

HAZARDOUS DECOMPOSITION PRODUCTS: carbon dioxide, nitrogen containing gases hydrogen cyanide.

SECTION 11: TOXICOLOGICAL INFORMATION

COMPONENT: Methylene bisphenyl diisocyanate (MDI)

LD50/LC50: Oral LD50 Rat 9200 mg/kg; Inhalation LC50 Rat 178 mg/cu m (no duration specified)

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

Ecological information is not available.

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. **DO NOT DUMP INTO SEWERS, ON THE GROUND, OR INTO ANYBODY OF WATERS.** All disposals must be in compliance with Federal, State, and local laws and regulations. It is the responsibility of waste generator to comply with these laws and regulations.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED

IATA: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

CANADIAN CEPA DSL: The components of this product are included on the DSL or are exempt from DSL requirements.

This product may contain chemical substances that are regulated for export by various government agencies (such as the Environmental Protection Agency, the Bureau of Industry and Security, or the Drug Enforcement Administration, among others). Before exporting this product from the USA or Canada, we recommend you get an export review.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 372. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name: Methylene bisphenyl diisocyanate (MDI)

CAS #: 101-68-8

PERCENT: 10-20

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System. D2A D2B

STATE REPORTING: This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

HMIS RATING:

HEALTH -- 2 FLAMMABILITY -- 1 REACTIVITY -- 0

EXPOSURE CONTROLS & PERSONAL PROTECTION: refer section 8.

Prepared by: ESS-SL Adhesives

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