

MATERIAL SAFETY DATA SHEET

SECTION 01 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Chemical Name: **NUFLEX[®] 480 POLYURETHANE ADHESIVE**
Manufacturer: **NUCO INC.**
150 Curtis Drive
Guelph, Ontario N1K 1N5
Tel: (519)-823-4994
Fax: (519)-823-1099
Infotrac 24 Hour Emergency Tel: (800)-535-5053
Date: **October 30, 2009**
Prepared by: **Technical Services Department**
WHMIS Classification: **D2B**
Product Use: **Polyurethane Adhesive**

SECTION 02 – COMPOSITION / INFORMATION ON INGREDIENTS:

<u>Ingredients</u>	<u>CAS No.</u>	<u>%</u>	<u>LD50 (Oral-Rat)</u>	<u>LC50 (Inhalation-Rat)</u>
Talc	14807-96-6	15.0 – 40.0	Not available	Not available
Hydrotreated Middle Petroleum Distillates	64742-46-7	7.0 – 13.0	Not available	Not available
4,4' Diphenylmethane Diisocyanate (MDI)	101-68-8	7.0 – 13.0	15 mg/kg	Not available
Methylenediphenyl Diisocyanate	26447-40-5	1.0 – 5.0	Not available	Not available
Polymeric MDI Isocyanate	9016-87-9	1.0 – 5.0	Not available	Not available

The ingredients listed above are controlled products as defined in CPR, am. SOR/88-555 or 29 CFR 1910.1200

SECTION 03 – HAZARDS IDENTIFICATION:

ROUTES OF ENTRY INTO THE BODY (ACUTE EFFECTS):

Eyes: Causes eye irritation. May cause reversible corneal injury.
Skin: Causes skin irritation. Prolonged or repeated skin contact may cause sensitization or allergic reactions.
Inhalation: Causes respiratory tract irritation. May be harmful if inhaled and may cause acute irritation and/or sensitization of the respiratory system leading to an asthmatic condition, wheeziness and tightness of the chest. Sensitized persons may subsequently show asthmatic symptoms when exposed to atmospheric concentrations well below the occupational exposure limit. Repeated inhalation may lead to a permanent respiratory disability.
Ingestion: Swallowing large amounts may be harmful with irritation of mouth, throat and stomach.

WHMIS HAZARD SYMBOL(S):



SECTION 04 - FIRST AID MEASURES:

Eyes: Flush with copious quantities of lukewarm water. Seek medical attention immediately.
Skin: Remove contaminated clothing. Use of a mild solvent, such as mineral spirits, may help in removing uncured residue from clothing or other surfaces (avoid eye/skin contact). Wash thoroughly with warm water and non-abrasive soap. Seek medical attention if you feel ill or a reaction develops.

Inhalation: Remove to fresh air and provide water. Seek medical attention if you feel ill or a reaction develops.
Ingestion: Get immediate medical attention.

SECTION 05 - FIRE FIGHTING MEASURES:

Flammable Conditions: Avoid direct sources of heat or ignition in uncured state.
Extinguishing Media: Carbon dioxide, dry chemical, water fog or foam. Water can be used to cool fire exposed containers. Water stream directed into fire may cause frothing with subsequent spread of fire.
Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan.
Flash Point: Not applicable
Flammability Limits: Lower Explosion Limit – 1.6% by volume
Upper Explosion Limit – 10.2% by volume
Autoignition Temperature: Not available
Hazardous Decomposition Products: Carbon oxides, nitrogen oxides and traces of incompletely burned carbon products.
Sensitivity - Impact: None
Static: None

SECTION 06 – ACCIDENTAL RELEASE MEASURES:

Containment / Clean Up: Restrict access to the area of the spill. Provide ventilation and protective clothing. Scrape up adhesive and place in container for disposal. Clean area as appropriate since the adhesive may represent a slip hazard. Cleaning may require detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state, provincial, federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup.

SECTION 07 – HANDLING AND STORAGE:

Handling and Storage: Store in an adequately ventilated area under dry conditions between 50°F (10°C) to 77°F (25°C) and keep container tightly sealed when not in use.

SECTION 08 – EXPOSURE CONTROL / PERSONAL PROTECTION:

Component Exposure Limits: 4,4' Diphenylmethane Diisocyanate (CAS# 101-68-8): Provide adequate ventilation to control exposures within the following exposure guidelines: ACGIH TLV: 0.005 ppm (TWA) and OSHA: 0.020 ppm (Ceiling).
Talc (CAS# 14807-96-6): Although the talc is coated with the urethane resin observe the particulate limits. ACGIH TLV: TWA 2 mg/m³ respirable fraction.
Respiratory: Wear a NIOSH / MSHA approved respirator when exposure limits are exceeded.
Ventilation: In indoor applications, passive ventilation (opening of doors and windows) is recommended. Local exhaust as necessary to keep exposure levels within guidelines.
Personal Protective Equipment: Safety glasses with side-protection, impermeable gloves (e.g., neoprene, nitrile, silver shield (R)), coveralls or apron are important in preventing contamination of eyes, skin and clothing. Wash thoroughly after handling.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Paste
Odor and Appearance: Brown viscous material with mild odor
Odor Threshold: Not available
Specific Gravity: 1.26
Vapor Pressure: Not available
Vapor Density: Heavier than air
Evaporation Rate: Slower than Butyl Acetate
Boiling Point: 342 – 514°F (172 - 268°C)

Freezing Point: Not available
pH: Not available
Coeff. Oil/Water Distribution: Not available

SECTION 10 – STABILITY AND REACTIVITY:

Chemical Stability: Stable under normal temperature and pressure.
Incompatible Materials: Strong oxidizing agents or electrophiles and bases or acids. Alcohols and amine hardeners.
Reactive Conditions: Moisture and incompatible materials.
Hazardous Polymerization: Will not occur when handled properly.

SECTION 11 - TOXICOLOGICAL INFORMATION:

Effects of overexposure: Repeated and prolonged overexposure to the mixture of isocyanates listed in SECTION 02 can result in effects including allergic skin and/or respiratory sensitization. Quartz (CAS #14808-60-7) is a naturally occurring component of talc and is coated with the polyurethane, however, prolonged overexposure to quartz dust (CAS #14808-60-7) causes fibrotic lung disease (silicosis) and potentially lung cancer.
Sensitization: Individuals previously sensitized to isocyanates should take proper precautions against further exposure.
Carcinogenicity: Quartz (CAS #14808-60-7): IARC Group 1 – Carcinogenic to Humans; NTP – Reasonably Anticipated to be a Human Carcinogen; ACGIH A2 – Suspected Human Carcinogen. The quartz is present in the finished product at <0.1%.
Reproductive Toxicity: No known applicable information.
Teratogenicity: No known applicable information.
Mutagenicity: No known applicable information.
Synergistic Products: No known applicable information.

SECTION 12 – ECOLOGICAL INFORMATION:

Air: Complete information is not yet available.
Water: 4,4' Diphenylmethane Diisocyanate (CAS# 101-68-8): Acute and prolonged toxicity to fish; OECD Guideline 203 static: zebra fish/LC50 (96 h): >1,000 mg/l – Acute toxicity to aquatic invertebrates: OECD Guideline, part 1, static: Daphnia magna/EC50 (24 h): >1,000 mg/l.
Soil: Complete information is not yet available.

SECTION 13 – DISPOSAL CONSIDERATIONS:

Waste Disposal: Dispose in accordance with Federal, State / Provincial and local regulations.

SECTION 14 - TRANSPORT INFORMATION:

Shipping Information: Not subject to DOT, TDG, IMDG Code or IATA Regulations.

SECTION 15 - REGULATORY INFORMATION:

TSCA Inventory Status: Chemical components listed on TSCA inventory except as exempted.
NFPA Profile: Health 2, Flammability 1, Reactivity 0
SARA TITLE III Chemical Listings: Section 302 Extremely Hazardous Substances (40 CFR 355): Not known
Section 304 CERCLA Hazardous Substances (40 CFR 302): Not known
Section 311/312 Hazard Class (40 CFR 370): Acute: Yes; Chronic: Yes; Fire: No; Pressure: No; Reactive: Yes
Section 313 Toxic Chemicals (40 CFR 372): This product contains the following toxic chemicals which are subject to reporting under Section 313 (40 CFR Part 372): 4,4'-Diphenylmethane Diisocyanate (MDI) (CAS# 101-68-8) and Polymeric MDI Isocyanate (CAS# 9016-87-9).
State Substance List: This product contains a listed substance(s) that appears on one or more of the Substance Lists for Pennsylvania, Massachusetts, Minnesota, Rhode Island and New Jersey: talc (CAS#14807-96-6); methylenediphenyl

California Proposition 65 List:

diisocyanate (CAS# 26447-40-5); 4,4'-Diphenylmethane Diisocyanate (MDI) (CAS# 101-68-8) and Polymeric MDI Isocyanate (CAS# 9016-87-9). .
Quartz (CAS #14808-60-7) is naturally occurring in the talc and is present in the finished product at <0.1%, not a hazard under normal conditions of use.

Volatile Organic Content:

45 grams/liter (3.57% by weight).

Domestic Substance List:

Chemical components listed on DSL except as exempted.

SECTION 16 - OTHER INFORMATION:

The information herein is given in good faith, but no warranty, express or implied, is made. Product users should make independent judgements of the suitability of this information to ensure proper use and to protect the health and safety of employees.

Form: MSDS NUFLEX 480 POLYURETHANE ADHESIVE Rev.: 0 Date: 10/09