



Nuflex® 480

SECTION 1. IDENTIFICATION

Product Identifier	Nuflex® 480
Other Means of Identification	Polyurethane Adhesive
Recommended Use	Construction Adhesive.
Restrictions on Use	None known.
Manufacturer	NUCO Inc., 150 Curtis Dr., Guelph, Ontario, N1K 1N5, Canada, (519) 823-4994, www.sealantcentre.com
Emergency Phone No.	Infotrac 24 Hour Emergency Tel, (800) 535-5053
Date of Preparation	April 17, 2018

SECTION 2. HAZARD IDENTIFICATION

Classification

Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Respiratory sensitization - Category 1; Skin sensitization - Category 1B; Specific target organ toxicity (single exposure) - Category 3; Specific target organ toxicity (repeated exposure) - Category 2

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Causes skin irritation.

Harmful if inhaled.

May cause an allergic skin reaction.

Causes eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause cancer.

May cause damage to organs (respiratory system) through prolonged or repeated exposure if inhaled.

Precautionary Statement(s):

Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash hands and skin thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
[In case of inadequate ventilation] wear respiratory protection (NIOSH approved air-purifying respirator with an organic vapour cartridge).

Response:

IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice or attention.
If experiencing respiratory symptoms: Call a POISON CENTRE or doctor.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Talc, Containing No Asbestos or Crystalline Silica	14807-96-6	25.0-50.0		
4,4'-Methylenediphenyl diisocyanate	101-68-8	10.0-15.0		
Distillates (petroleum), hydrotreated middle	64742-46-7	3.0-5.0		
Methylenediphenyl diisocyanate (mixed isomers)	26447-40-5	3.0-5.0		
Polymethylene polyphenyl isocyanate	9016-87-9	1.0-3.0		

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms (e.g. coughing, shortness of breath, wheezing), call a Poison Centre or doctor.

Skin Contact

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. Get medical advice or attention if you feel unwell. If skin irritation or a rash occurs, get medical advice or attention.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the

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eyelid(s) open. Remove contact lenses, if present and easy to do. If eye irritation persists, get medical advice or attention.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Call a Poison Centre or doctor if you feel unwell.

First-aid Comments

If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled and/or on skin: a single exposure to a high concentration can cause a long-lasting condition like asthma. If this occurs, many things like other chemicals or cold temperatures can easily irritate the airways. Symptoms may include shortness of breath, tightness in the chest and wheezing.

Immediate Medical Attention and Special Treatment

Target Organs

Skin, respiratory system.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

Asthma, dermatitis, skin allergies.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

Water jet.

Specific Hazards Arising from the Product

Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides; very toxic polycyclic aromatic hydrocarbons; isocyanates.

Special Protective Equipment and Precautions for Fire-fighters

No special precautions are necessary.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. Minimize the use of water to prevent environmental contamination.

Methods and Materials for Containment and Cleaning Up

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Get expert advice before treating the spilled product with other chemicals to make it less hazardous.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Do not breathe in this product. Prevent all skin contact. Do not get in eyes, on skin or on clothing. Only use where there is adequate ventilation. Avoid release to the environment.

Conditions for Safe Storage

Store in an area that is: well-ventilated, cool, dry. Store in a closed container.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Polymethylene polyphenyl isocyanate	Not established	0.005 ppm	Not established	0.02 ppm	Not established	Not established
4,4'-Methylenediphenyl diisocyanate	0.005 ppm	0.005 ppm	Not established	0.02 ppm	Not established	Not established
Distillates (petroleum), hydrotreated middle	200 mg/m3	Not established	Not established	Not established	Not established	Not established
Talc, Containing No Asbestos or Crystalline Silica	2 mg/m3	Not established	0.1 mg/m3	Not established	Not established	Not established
Methylenediphenyl diisocyanate (mixed isomers)	0.05 ppm	Not established	Not established	0.02 ppm	Not established	Not established

Appropriate Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: neoprene rubber, nitrile rubber, Viton®, Silver Shield®.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Light tan paste.
Odour	Oily
Odour Threshold	Not available
pH	~ 7.0; Neutral
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	Not available
Flash Point	93.34 °C (estimated)
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	10.2% (upper); 1.6% (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	> 1

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Relative Density (water = 1)	1.26 at 25 °C (77 °F)
Solubility	Slightly soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not applicable (kinematic); Not applicable (dynamic)
Other Information	
Volatile Organic Content	45 g/L, 3.57% w/w (CARB 310 Method)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

Prolonged exposure to high temperatures. Water, moisture or humidity. Incompatible materials.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), strong reducing agents (e.g. hydrides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide), alcohols (e.g. ethanol).
Not corrosive to metals.

Hazardous Decomposition Products

None known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

Likely Routes of Exposure

Inhalation.
Skin contact.
Skin absorption.
Eye contact.
Ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Polymethylene polyphenyl isocyanate	11 mg/L	> 10000 mg/kg (rat)	> 10000 mg/kg (rabbit)
4,4'-Methylenediphenyl diisocyanate	490 mg/m3 (rat) (4-hour exposure)	> 2000 mg/kg (rat)	
Methylenediphenyl diisocyanate (mixed isomers)	490 mg/m3 (rat) (4-hour exposure) (aerosol)	> 2000 mg/kg (rat)	> 9400 mg/kg (rabbit)

Skin Corrosion/Irritation

Human experience shows moderate or severe irritation. Symptoms include pain, redness, and swelling.

Serious Eye Damage/Irritation

May cause very mild irritation based on information for closely related chemicals.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

A single exposure to a high concentration can cause a long-lasting condition like asthma. If this occurs, many things like other chemicals or cold temperatures can easily irritate the airways. Symptoms may include shortness of breath, tightness in the chest and wheezing.

Skin Absorption

Can cause effects as described for inhalation.

Ingestion

May be harmful based on information for closely related materials.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause irritation of the respiratory system. Respiratory tract injury has been observed. In severe cases, permanently decreased lung function may occur.

Respiratory and/or Skin Sensitization

Human experience shows severe asthma or asthma-like symptoms (respiratory sensitization) in a substantial proportion of people exposed at work. In sensitized people, exposure to a very small amount of product can cause symptoms including wheezing, difficult breathing, sneezing and runny or blocked nose. Can cause death. Symptoms can develop immediately following exposure or hours later. Repeated exposure will make the reaction worse.

Human experience shows allergic skin reactions (skin sensitization) in a substantial proportion of people exposed at work. In sensitized people, contact with a very small amount of product can cause an allergic reaction. Symptoms include redness, rash, itching and swelling. This reaction can spread from the hands or arms to the face and body. Repeated exposure will make the reaction worse.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Polymethylene polyphenyl isocyanate	Group 3	Not designated	Not Listed	Not Listed
4,4'-Methylenediphenyl diisocyanate	Group 3	Not designated	Not Listed	Not Listed
Distillates (petroleum), hydrotreated middle	Group 3	A3	Not Listed	Not Listed
Talc, Containing No Asbestos or Crystalline Silica	Group 3	A4	Not Listed	Not Listed
Methylenediphenyl diisocyanate (mixed isomers)	Group 3	Not designated	Not Listed	Not Listed

IARC:

Group 3 – Not classifiable as to its carcinogenicity to humans.

ACGIH®:

A3 – Confirmed animal carcinogen.

A4 – Not classifiable as a human carcinogen.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located.

Ecotoxicity

No information was located.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations. This product and its container must be disposed of as hazardous waste. Do NOT dump into any sewers, on the ground or into any body of water. Empty containers retain product residue. Follow label warnings even if container appears to be empty.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations. Not regulated under IATA Regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

None known.

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL or are not required to be listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

California Proposition 65:

Not applicable.

CERCLA:

4,4' - Diphenylmethane diisocyanate CAS 101-68-6 2,268 kg (5000 lbs)
Polymeric MDI CAS 9016-87-9 2,268 kg (5000 lbs)
Phosphoric Acid CAS 7664-38-2 2,268 kg (5000 lbs)
Methylethyl Ketone CAS 78-93-3 2,268 kg (5000 lbs)
Iron Trichloride CAS 7705-08-0 453.6 kg (1000 lbs)
Chlorobenzene CAS 108-90-7 453.6 kg (1000 lbs)

CPSC Classification: Not applicable.

SARA Title III - Section 302:
Not applicable.

SARA Title III - Section 311/312:
Acute Health Hazard
Chronic Health Hazard

SARA Title III - Section 313. (Methylenediphenyl diisocyanate (mixed isomers)). (Polymethylene polyphenyl isocyanate). (4,4'-Methylenediphenyl diisocyanate)

Massachusetts, New Jersey, and Pennsylvania Right To Know. (Talc, Containing No Asbestos or Crystalline Silica). (Methylenediphenyl diisocyanate (mixed isomers)). (Polymethylene polyphenyl isocyanate)

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 2 Flammability - 1 Instability - 0
SDS Prepared By	Technical Services Department
Phone No.	519-823-4994
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Revision Indicators	Revision 2
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
Disclaimer	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.

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