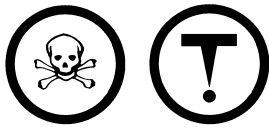




MATERIAL SAFETY DATA SHEET

DUOTACK – Part A

Disponible en français

WHMIS	PROTECTIVE CLOTHING	TRANSPORT OF DANGEROUS GOODS
		 <p>Isocyanates, Toxic, NOS (Diphenylmethane diisocyanate (MDI) solution) Class 6.1 UN 2206 P.G. : III</p>

SECTION I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: Duotack – Part A
Use: Adhesive for insulating material.

Code of MSDS: CA U DRU SS FS 118
Formula number: Not applicable
Revision date: November 16, 2011

Distributor: Soprema Canada
1675 Haggerty Street
Drummondville (Quebec) J2C 5P7
CANADA
Tel.: (819) 478-8163

In case of emergency:

SOPREMA (8:00am to 5:00pm – Eastern time): (800) 567-1492
CANUTEC (Canada) (24h.): (613) 996-6666
CHEMTREC (USA) (24h.): (800) 424-9300
Poison Control Centre: Consult local telephone directory

EMERGENCY OVERVIEW!!!

Tan viscous liquid with negligible odour. This product is harmful by inhalation, when in contact with the skin and if it is swallowed. This product may cause sensitization by inhalation and skin contact. Repeated inhalation of vapours may cause an allergic respiratory response, the onset of which may be delayed several hours after exposure. Avoid contamination. Water reacts with product liberating CO₂ gas.

SECTION II. COMPOSITION AND INFORMATION ON DANGEROUS INGREDIENTS

NAME	CAS #	% WEIGHT	EXPOSURE LIMIT (ACGIH)	
			TLV-TWA	TLV-STEL
Polymethylene polyphenylene isocyanate	9016-87-9	10-30	Not available	Not available
Methylene bisphenol isocyanate (MDI)	101-68-8	10-30	0.005 ppm	Not available

SECTION III. POTENTIAL HEALTH EFFECTS**HAZARDOUS HEALTH EFFECTS****INHALATION OF PARTICULATES (SPRAYING) AND FUMES:**

Allergic lung reaction such as asthma, which includes coughing, wheezing, chest pain and tightness, difficulty breathing and shortness of breath; irritation of the upper respiratory tract, which includes burning of mouth, throat and chest.

EYES: This product is irritating to the eyes. Symptoms include itching, burning, redness and tearing.

INGESTION: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

SKIN: This product is irritating to the skin. This product may cause allergic skin reaction.

ACUTE HEALTH EFFECTS: See Above at Inhalation of particles and fumes.

SECTION IV. FIRST AID MEASURES**INHALATION:**

Leave area to breathe fresh air. Oxygen therapy may be necessary, seek medical attention if needed. Should be observed by physician immediately if overexposure is severe.

EYES:

Flush immediately with running water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.

INGESTION:

Get medical attention or advice immediately. Do not induce vomiting unless advised by a physician. Never give anything by mouth to a victim who is unconscious or is having convulsions.

SKIN:

Wash area of contact thoroughly with soap and water. If irritation, rash or other disorders develop or persist, get medical attention immediately. Contaminated leather articles, including shoes, that cannot be decontaminated should be discarded.

SECTION V. FIRE-FIGHTING MEASURES

FLASH POINT: > 350°F (177°C)

METHOD: PM cc

FLAMMABILITY LIMITS IN AIR: N/A

AUTO-IGNITION TEMPERATURE: Not established

FIRE AND EXPLOSION HAZARDS: N/A

SPECIAL FIRE FIGHTING PROCEDURES:

Cool containers with water spray. Containers may burst if overheated. This product reacts with water producing CO₂ gas. Do not reseal contaminated containers as a hazardous pressure build-up could result in container rupture. During a fire, personnel at the scene must avoid exposure to fumes using accepted fire fighting techniques.

COMBUSTION PRODUCTS: Combustion products may include carbon oxides, nitrogen oxides, hydrocarbons, HCN and isocyanates.

EXTINGUISHING MEDIA: Dry chemical powder, CO₂ foam.

OTHER PRECAUTIONS: Firefighters should wear full protective clothing including self contained breathing apparatus.

SECTION VI. ACCIDENTAL RELEASE MEASURES**RELEASE OR SPILL:**

Evacuate the area promptly. Keep upwind of the spilled material and isolate exposure. Avoid inhalation of vapours or mists. Surface may become slippery after a spill. Wear appropriate personal protective equipment. Stop the flow of material, if this is without risk. Do not allow to drain to sewers. Ventilate the contaminated area. Absorb spill with inert material (sand, earth or other suitable material). Transfer to appropriate container for neutralization or disposal. Follow all local, state and federal regulations for disposal of the spilled material.

SECTION VII. HANDLING AND STORAGE**HANDLING AND STORAGE PRECAUTIONS:**

Avoid contact with skin and eyes. Do not breathe vapours. Wear proper personal protective equipment. Avoid contact with water. Do not re-seal contaminated product as a hazardous build-up of pressure may result from liberation of CO₂ gas. Avoid contact with metals such as aluminium, brass, copper, galvanized metals, tin and zinc. Keep containers properly sealed in a cool, dry, well-ventilated area between 60°F – 80°F (15.6°C – 26.6°C). Do not store in open, unlabeled or mislabelled containers, Do not reuse empty container without commercial cleaning or reconditioning.

SECTION VIII. EXPOSURE CONTROLS / PERSONAL PROTECTION

HANDS:	The use of neoprene, nitrile rubber or butyl rubber gloves is recommended.
RESPIRATORY:	Use a NIOSH-approved organic vapour respirator to protect against inhalation of vapours. A respirator should be used if ventilation is unavailable, or is inadequate for keeping vapours levels below the applicable exposure limits.
EYES:	Wear chemical goggles; add face shield (if splashing is possible).
OTHERS:	Eye wash fountain and emergency showers are recommended.
CONTROL OF VAPOURS:	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Viscous liquid
ODOUR:	Faint, aromatic
COLOR:	Tan
PHYSICAL STATE:	Liquid
pH:	N/A
VAPOR PRESSURE:	N/A
VAPOR DENSITY:	N/A
BOILING POINT:	N/A
MELTING POINT:	N/A
FREEZING POINT:	N/A
EVAPORATION RATE:	N/A
VOC:	N/A
SOLUBILITY IN WATER:	Reacts with water
VISCOSITY:	16,000 cps at 75°F
SPECIFIC GRAVITY:	1.13
% VOLATILE:	< 0.15%

SECTION X. STABILITY AND REACTIVITY

STABILITY:	This material is stable at room temperature. Reaction with water (moisture) produces CO ₂ gas. Exothermic reaction with materials containing active hydrogen groups.
CONDITIONS TO AVOID:	Avoid high temperatures. Avoid contact with water. Avoid contamination. Avoid contact with metals such as aluminium, brass, copper, galvanized metals, tin and zinc.
INCOMPATIBILITY:	Avoid contact with water, alcohols, amines, bases and acids.
HAZARDOUS DECOMPOSITION:	Carbon oxides, nitrogen oxides, hydrocarbons, HCN and isocyanates.
CONDITIONS TO AVOID POLYMERIZATION:	Polymerization will occur at elevated temperatures in the presence of alkalies, tertiary amines and metal compounds.

SECTION XI. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA:		
<i>Polymethylene polyphenylene isocyanate:</i>	LC50 (inhalation, rat):	490 mg/m ³ (4-hour exposure)
	LD50 (oral, rat):	>10 000 mg/kg
	LD50 (dermal, rabbit):	6 200 mg/kg
<i>Methylene bisphenol isocyanate:</i>	LC50 (inhalation, rat):	369 mg/m ³ (4-hour exposure)
	LD50 (oral, rat):	> 10 000 mg/kg
	LD50 (dermal, rabbit):	> 10 000 mg/kg
ACUTE EXPOSURE: This product is harmful by inhalation, when in contact with the skin and if it is swallowed. This product may cause sensitization by inhalation and skin contact. Repeated inhalation of vapours may cause an allergic respiratory response, the onset of which may be delayed several hours after exposure. This product is irritating to the eyes. Symptoms include itching, burning, redness and tearing. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.		
CHRONIC EXPOSURE: Repeated or prolonged exposure to MDI may result in isocyanate sensitization (chemical asthma) in some individuals, causing them to react to isocyanate exposure at concentrations below the established exposure limits. Symptoms include chest tightness, wheezing, coughing, and shortness of breath. Effects can be delayed. Overexposure can cause lung damage, including decreased lung function. Prolonged or repeated skin contact may cause irritation leading to dermatitis. Skin sensitization may also occur.		
CARCINOGENICITY: No additional information available.		

SECTION XII. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL DATA:	N/A
CHEMICAL FATE:	N/A

SECTION XIII. DISPOSAL CONSIDERATIONS

RCRA CLASS:	N/A
DISPOSAL METHOD:	Not regulated by RCRA. Dispose of in compliance with local, state, federal and provincial regulations.
EPA REPORTABLE QUANTITIES:	N/A

SECTION XIV. TRANSPORT INFORMATION

DOT SHIPPING NAME:	Isocyanates, Toxic, NOS (Diphenylmethane diisocyanate (MDI) solution).	
DOT HAZARD CLASS:	6.1	
UN/NA NUMBER:	UN 2206	
PACKING GROUP:	III	
REPORTABLE QUANTITY (RQ):	5000 lb final RQ; 2270 kg final RQ	Methylene bisphenol isocyanate (MDI)
	1.0% de minimis concentration	Methylene bisphenol isocyanate (MDI)
	1.0% de minimis concentration	Polymethylene polyphenylene isocyanate

SECTION XV. REGULATORY INFORMATION

WHMIS:	D1A - Poisonous and infectious material - Immediate and serious effects - Very toxic D2A - Poisonous and infectious material - Other effects - Very toxic D2B - Poisonous and infectious material - Other effects - Toxic	
TSCA STATUS:	On the TSCA Inventory.	
OSHA STATUS:	Considered hazardous.	
TARGET ORGANS:	Eyes and respiratory system.	
OSHA HAZARDOUS COMPONENTS:	Methylenebis Phenylisocyanate (101-68-8) Not classified as a carcinogen with NTP, ACGIH, or IARC. Not regulated as a carcinogen with OSHA. Classified by IARC in Group 3 (not classifiable as to its carcinogenicity to humans).	
SARA 311 RATINGS:	Immediate Health Hazard	Y
	Delayed Health Hazard	Y
	Fire Hazard	N
	Reactivity Hazard	Y
	Sudden Release of Pressure Hazard	Y
SARA 313 INGREDIENTS:	Methylene bisphenol isocyanate (MDI) (101-68-8) Polymethylene polyphenylene isocyanate (9016-87-9)	
Proposition 65 Ingredients – Chemicals known to the State of California to cause cancer or birth defects or other reproductive harm: None		

HMIS (USA):

2	HEALTH
1	FLAMMABILITY
1	PHYSICAL HAZARD
	PROTECTIVE EQUIPMENT

NFPA (USA):

The NFPA hazard diamond consists of four colored triangles meeting at a central point. The top triangle is red and labeled '1' with 'Flammability' to its right. The left triangle is blue and labeled '2' with 'Health' to its left. The right triangle is yellow and labeled '1' with 'Instability' to its right. The bottom triangle is white and labeled '0' with 'Specific hazard' to its right.

SECTION XVI. OTHER INFORMATION

Glossary:

ACGIH:	American Conference of Governmental Industrial Hygienists
ANSI:	American National Standards Institute
ASTM:	American Society for Testing and Materials
CAS:	Chemical Abstract Services
CFR:	Code of Federal Regulations (United States)
CSA:	Canadian Standardisation Association
DOT:	Department of Transportation (United States)
DSL:	Domestic Substances List (Canada)
EPA:	Environmental Protection Agency (United States)
HMIS:	Hazardous Material Information System
IARC:	International Agency for Research on Cancer
LC50:	(Lethal concentration ₅₀) Concentration of a substance in air that causes death of 50% mortality of a defined animal population
LD50:	(Lethal dose ₅₀) Single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of a defined animal population.
NFPA:	National Fire Protection Association (United States)
NIOSH:	National Institute for Occupational Safety and Health
NTP:	National Toxicology Program
OSHA:	Occupational Safety & Health Administration (United States)
PEL:	Permissible Exposure Limit
RCRA:	Resource Conservation and Recovery Act (United States)
RTECS:	Registry of Toxic Effects of Chemical Substances
TDG:	Transportation of Dangerous Goods
TLV:	Threshold Limit Value
TWA:	Time-weighted average
TSCA:	Toxic Substances Control Act (United States)
WHMIS:	Workplace Hazardous Materials Information System (Canada)

Reference:

Material Safety Data Sheet of supplier

For more information: **SOPREMA Canada** 1-800-567-1492

The Material Safety Data Sheets of SOPREMA are available on Internet at the following site: <http://www.soprema.ca>

Justification of the update:

- Triennial update.

This MSDS contains all the information required by ANSI Z-400.1-1998 standard (United States), by regulation 29 CFR Part 1910.1200 of the Hazard Communication Standard of OSHA, and is in accordance with standard DORS/88-66 OF WHMIS Canada.

FOR INDUSTRIAL USE ONLY. Keep out of reach of children. To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.