1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	**Solmax Polyethylene Geomembrane**
Product Code	Solmax 420*, 430*, 440*, 460*, 480*, 500*, 820*, 830*, 840*, 860*, 880*, 900*, Extrusion Rod and Maxlock
Chemical Name	Polyethylene
Chemical Family	Polymer
Product Use	Liquid barrier in earthworks, Containment liner
Synonyms	Polyehtylene Liner, Polymeric Geosynthetic Barrier

Manufacturer
Solmax International Inc.
2801 boul. Marie-Victorin
Varennes, QC, CANADA J3X 1P7

Emergency Telephone Number
(Canutec): (613) 996-6666

2 – COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	AMOUNT (% weight)
Carbon Black	1333-86-4	2.5%
Polyethylene Resin	25213-02-9	97.5 %

3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance Black Sheet **Odor** Negligible odor

IMMEDIATE HEALTH EFFECTS

EYE : Not expected to cause prolonged or significant eye irritation. If this material is heated, thermal burns may result from eye contact.

SKIN : Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. If this material is heated, thermal burns may result from skin contact. Thermal burns to the skin: may include pain or feeling of heat, discoloration, swelling, and blistering.

INGESTION : Ingestion is not expected to occur. If swallowed, may physically irritate digestive system.

INHALATION : Not expected to be harmful if inhaled. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the upper respiratory tract.

4 - FIRST AID MEASURES

EYE : If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding the eyelids open. Remove contact lenses, if worn. Get immediate medical attention.

SKIN : To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. Get medical attention if any symptoms develop. If the hot material gets on skin, quickly cool in water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin or use solvents or thinners to dissolve it. The use of vegetable oil, mineral oil, or petroleum jelly is recommended for removal of this material from the skin.

INGESTION : If swallowed, do not induce vomiting. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

INHALATION : Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue.

5 - FIRE FIGHTING MEASURES

NFPA RATINGS : **Health:** 1 **Flammability:** 1 **Reactivity:** 0

FLAMMABLE PROPERTIES
Flashpoint: NA
Autoignition: 260 to 410 °C (500 to 700 °F)
Flammability (Explosive) Limits (% by volume in air): **Lower:** NA **Upper:** NA

EXTINGUISHING MEDIA

Use water fog, foam, dry chemical or carbon dioxide (CO_2) to extinguish flames.

PROTECTION OF FIRE FIGHTERS

Fire Fighting Instructions: Evacuate area of all unnecessary personnel. Wear appropriate safety equipment for fire conditions including NIOSH self-contained breathing apparatus (SCBA) and other protective equipment as described in Section 8 if exposure conditions warrant.

Combustion Products: Combustion may form carbon oxides, other hydrocarbons and hydrocarbon oxidation products, depending on temperature and air availability.

6 - ACCIDENTAL RELEASE MEASURES

Recycle whenever possible. Place in container for proper disposal. If heated material is spilled, allow it to cool before proceeding with disposal methods.

7 - HANDLING AND STORAGE

Handling : A membrane roll is wide and heavy. Use appropriate equipment to handle it securely. Membrane can be very slippery at any time. Use appropriate footwear to walk on it. Avoid

breathing vapors or fumes which may be released during welding (thermal processing). Avoid contact of heated material with eyes, skin, and clothing.

Unusual Handling Hazards: Potentially toxic/irritating fumes may be evolved from heated material.

General Storage Information: Treat as a solid that can burn. Store away from oxidizing materials, in a cool, dry place with adequate ventilation. Bond and ground transfer equipment. DO NOT USE OR STORE near heat, sparks or open flames. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

General Considerations : Consider the potential hazards of this material (see Section 3) applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Engineering Controls : If heated material generates vapor or fumes, use adequate ventilation, or other engineering controls to control exposure.

PERSONAL PROTECTIVE EQUIPMENT

Eye/Face Protection : Wear eye protection such as safety glasses, chemical goggles, or faceshields if engineering controls or work practices are not adequate to prevent eye contact. If this material is heated, wear chemical goggles or safety glasses and a face shield.

Skin Protection : If this material is heated, wear insulated clothing to prevent skin contact if engineering controls or work practices are not adequate to prevent skin contact.

Respiratory Protection : None normally required.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black Sheet (solid at Normal Temperature)
Odor	Negligible odor
Melting Point	140°C (284°F)
pH	NA
Vapor Pressure	NA
Vapor Density (Air=1)	NA
Boiling Point	NA
Solubility (In Water)	Insoluble in water (Soluble in Petroleum Naphtha, Xylene, Toluene Trichloroethylene, Highly heated mineral oil.
Percent Volatile	NA
Specific Gravity	0.94 g/cm^3
Evaporation Rate	<1

9 - PHYSICAL AND CHEMICAL PROPERTIES

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Avoid sparks, open flame, static discharges and all sources of ignition.

Incompatibility With Other Materials: Reacts with acids, halogenated hydrocarbons, aldehydes, ketones and strong oxidizing materials.
Hazardous Decomposition Products: carbon oxides, aldehydes, benzene, other hydrocarbons and hydrocarbon oxidation products.
Hazardous Polymerization : Hazardous polymerization will not occur.

11 - TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

Acute Oral Toxicity :	LD50 / not known
Acute Dermal Toxicity :	LD50 / not known
Acute Inhalation Toxicity :	LD50 / not known
Eye Irritation :	This material is not expected to be irritating to the eyes at room temperature.
Skin Irritation :	This material is not expected to be irritating to the skin at room temperature.
Carcinogenic effects :	Possible risk of irreversible effects. Carbon Black is classified by: IARC: Group 2B possible human carcinogen. When encapsulated in a plastic matrix, risk of exposure is reduced.
Reproductive Toxicity :	Not believed to be a reproductive hazard.

12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA :	Not expected to be hazardous to the environment in present form, and not expected to be biodegradable.
ECOTOXICITY :	May be harmful for wildlife if ingested.

13 - DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL :	Dispose of recovered material according to current local regulations. Recycle if possible. This material may be considered as an hazardous waste, depending of the local regulations.

14 - TRANSPORT INFORMATION

TDG (Canada)	Not regulated for transport.
DOT (US)	Not regulated for transport.
ICAO / IATA	Not regulated for transport.
IMO / IMDG	Not regulated for transport.
RID / ADR	Not regulated for transport.

15 - REGULATORY INFORMATION

WHMIS CLASSIFICATION : Not considered a controlled product.

INTERNATIONAL INVENTORY LISTINGS

CANADA :	All the components of this material are on the Canadian Domestic Substances List (DSL).
UNITED STATES :	All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory.
EUROPEAN UNION :	All the components of this material are in compliance with the EU Seventh Amendment Directive 92/32/EEC.

16 - OTHER INFORMATION

NFPA RATINGS : **Health:** 1 **Flammability:** 1 **Reactivity:** 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA).

ABBREVIATIONS

NIOSH	-	National Institute for Occupational Safety & Health	**NFPA**	-	National Fire Protection Agency
WHMIS	-	Workplace Hazardous Materials Information System	**IARC**	-	Intl. Agency for Research on Cancer
TDG	-	Transport Dangerous Goods	**ICAO**	-	International Civil Aviation Organization
DOT	-	U.S. Department of Transportation	**IATA**	-	International Air Transport Association
IMO	-	International Maritime Organization	**IMDG**	-	International Maritime Dangerous Goods
LD50	-	Lethal Dose	**NA**	-	Not Applicable

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