



HPTC

High Performance Top Coat

Resin & Hardener

SDS

PREPATION DATE: 02/02/09



RESIN

E. W. INDUSTRIES LTD.

Box 336
Imperial, SK S0G 2J0
1-888-799-3960

CHEMTREC: 800-424-9300

MATERIAL SAFETY DATA SHEET

PREPARATION DATE: 02/02/09

I. PRODUCT IDENTIFICATION

PRODUCT NAME: High Performance Top Coat Resin
PRODUCT NUMBER: HPTC
CHEMICAL FAMILY: POLYESTER POLYOL IN ORGANIC SOLVENT

II. HAZARDOUS INGREDIENTS

EnduraFlake High Performance Top Coat (HPTC) Resin & Hardener

PREPATION DATE: 02/02/09

Ingredient Name	CAS Number	Concentration(%)
Propylene Glycol Monomethyl Ether Acetate	108-65-6	20-45%
Benzene, 1-Chloro-4(trifluoromethyl)-	98-56-6	10-25%
Proprietary Ingredients		10-25%
Methyl Acetate	79-20-9	10-25%

EMERGENCY OVERVIEW

WARNING: Color: Cloudy Form: Liquid Odor: Solvent
Flammable. May cause eye, skin, and respiratory tract irritation. Also harmful by inhalation and if swallowed. Vapors may travel to areas away from worksite before igniting/flashing back to vapor source. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Closed container may forcibly rupture under extreme heat. Toxic fumes are produced during a fire situation when product is combined with phosphorus-containing material. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. May affect nervous system.

Potential Health Effects

Primary Route of Entry: Skin Contact, Eye Contact, Ingestion, Inhalation

Medical Conditions Aggravated By Exposure: Skin disorders, Respiratory disorders, Eye disorders

NFPA 704M Rating

Health	2
Flammability	3
Reactivity	0
Other	

0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

*= Chronic Health Hazard

HMIS Rating

Health	2*
Flammability	3
Physical Hazard	0

0= Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

* = Chronic Health Hazard

III. PHYSICAL PROPERTIES

Physical Form: Liquid
Color: Cloudy
Odor: Solvent
Boiling Point: Begins at 137.8°C (180°F) Estimated based on components
Melting/Freezing Point: Not Established
Solubility in Water: Insoluble
Specific Gravity: 1.1 @ 77° F (25° C)
Bulk Density: 9.2 lbs/gal
% Volatile By Volume: Approximately 29%
Vapor Pressure: 3.7 mmHg (PMA) @ 20°C (68°F)

IV. FIRE AND EXPLOSION DATA

Flash Point: 122.0° F (50.0° C) Setaflash (ASTM D-3243,

PREPATION DATE: 02/02/09

D-3278, D-3828)

Flammable Limits:

Upper Explosive Limit (UEL) (%): 13.1% @ 283° F PMA

Lower Explosive Limit (LEL) (%): 1.3% @ 173° F PMA

Extinguishing Media:

All extinguishing media are suitable.

Special Fire Fighting Procedures:

Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Use cold water to cool fire-exposed containers to minimize risk of rupture.

Unusual Fire/Explosion Hazards:

Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. If this polyol is combined with phosphorus compounds, trimethylolpropanesphosphate (TMPP), a known neurotoxin, can be given off in the event of a fire. Therefore, we do not recommend mixing this polyol with phosphorus compounds.

V. HUMAN HEALTH DATA

Route(s) of Entry: Inhalation, Skin Contact, Eye

Human Effects and Symptoms of Overexposure:

Acute Inhalation: Solvent vapors are irritating to the eyes, nose, throat and respiratory tract resulting in red, itchy eyes, dryness of the throat and tightness in the chest. Other possible symptoms of overexposure include headache, nausea, narcosis, fatigue and loss of appetite.

Chronic Inhalation: Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Symptoms include loss of memory, loss of intellectual ability, and loss of coordination.

Acute Skin Contact: Repeated or prolonged skin contact with the solvent can result in dry, defatted and cracked skin causing increased susceptibility to infection. In addition, dermatitis and skin rash and redness may occur from skin contact. Solvents may penetrate the skin causing effects similar to those identified under acute inhalation symptoms.

Chronic Skin Contact: Chronic skin exposure to the solvent may cause effects similar to those identified under chronic inhalation effects.

Acute Eye Contact: Liquid, aerosols or vapors are severely irritating and can cause pain, tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

Chronic Eye Contact: Prolonged vapor contact may cause conjunctivitis.

Acute Ingestion: Can result in irritation in the digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting and diarrhea. Vomiting may cause aspiration of solvent resulting in chemical pneumonitis.

Chronic Ingestion: Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

Carcinogenicity: This product is not listed by NTP, IARC or regulated as a carcinogen by OSHA.

VI. EMERGENCY AND FIRST AID PROCEDURES

First Aid for Eyes: Flush with clean, lukewarm water (low pressure) for at least 15 minutes while occasionally lifting eyelids. Obtain medical attention if irritation persists.

First Aid for Skin: Remove contaminated clothing and wash affected areas thoroughly with soap and water. Wash contaminated clothing before reuse.

First Aid for Inhalation: Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention.

PREPATION DATE: 02/02/09

First Aid for Ingestion: DO NOT INDUCE VOMITING. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Consult physician.

VII. EMPLOYEE PROTECTION RECOMMENDATIONS

Industrial Hygiene/Ventilation Measures: General dilution and local exhaust as necessary to control airborne vapors, mists, dusts and thermal decomposition products below appropriate airborne concentration standards/guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build up of explosive atmospheres and to prevent off gases from entering the workplace.

Eye Protection Requirements: Liquid chemical goggles in combination with a full-face shield. Contact lenses should not be worn.

Skin Protection Requirements: Permeation resistant gloves (butyl rubber, nitrile rubber). Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered only by the cream to a minimum.

Respiratory/Ventilation Requirements: The use of a positive pressure supplied air respirator is mandatory when: airborne concentrations are not known; airborne solvent levels are 10 times the appropriate TLV; spraying is performed in a confined space or area with limited ventilation.

Additional Protective Measures: Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eyewash stations should be available.

VIII. REACTIVITY DATA

Stability:	This is a stable material.
Hazardous Polymerization:	Will not occur.
Incompatibilities:	Heat, flames and sparks.
Instability Conditions:	None determined.
Decomposition Products:	By fire and thermal decomposition: CO, CO ₂ , oxides of nitrogen (NO _x), dense black smoke, other undetermined compounds

IX. SPILL AND LEAK PROCEDURES

Spill or Leak Procedures: Cleanup personnel must use appropriate personal protective equipment. Remove all sources of ignition, including flames, heat and sparks. Dike or dam spilled material and control further spillage, if possible. Do not allow spilled material or wash water to enter sewers, surface waters, or groundwater systems. Cover spill with inert material (e.g., dry sand or earth) and collect for proper disposal. Wash spill area with soap and water.

X. SPECIAL PRECAUTIONS & STORAGE DATA

Storage Temperature (Min/Max):	32° F (0° C)/122° F (50° C)
Shelf Life:	12 months at 77° F (25° C) in closed original container.

Handling/Storage Precautions: Keep away from heat, sparks and open flames. Ground and bond containers and equipment before transferring to avoid static sparks. Do not breathe vapors or spray mist. Avoid contact with eyes. Avoid contact with skin or clothing. Use only with adequate ventilation/personal protection. Wash thoroughly after handling. Keep container closed when not in use.

Waste Disposal Method

Waste disposal should be in accordance with existing federal, state and local environmental control laws.

Empty Container Precautions:

PREPATION DATE: 02/02/09

Do not heat or cut container with electric or gas torch. Recondition or dispose of empty container in accordance with governmental regulations. Do not reuse empty container without proper cleaning. Label precautions also apply to this container when empty.

XI. SHIPPING INFORMATION

LAND TRANSPORT (DOT)

Proper Shipping Name:	Resin solution (contains Propylene Glycol Monomethyl Ether Acetate)
Hazard Class or Division:	3
UN/NA Number:	UN1866
Packaging Group:	PG III
Hazard Label(s):	Flammable Liquid
Hazard Placard(s):	Flammable Liquid

SEA TRANSPORT (IMO/ IMDG CODE) (OCEAN)

Proper Shipping name:	Resin solution (contains Propylene Glycol Monomethyl Ether Acetate)
Hazard Class Division Number:	3
UN Number:	UN1866
Packaging Group:	III
Hazard Label(s):	Flammable Liquid
Hazard Placard(s):	Flammable Liquid

AIR (ICAO/ IATA)

Proper Shipping Name:	Resin solution (contains Propylene Glycol Monomethyl Ether Acetate)
Hazard Class Division Number:	3
UN Number:	UN1866
Packing Group:	III
Hazard Label(s):	Flammable Liquid

XII. ECOLOGICAL DATA

Ecological Data for Propylene Glycol Monomethyl Ether Acetate**Biodegradation**

Acrobic, 100 %, Exposure time: 8 days

Acute and Prolonged Toxicity to Fish

LC50: 11 mg/l (Fathead minnow (Pimephales promelas), 96 hrs.)

Acute Toxicity to Aquatic Invertebrates

EC50: 408 mg/l (Water flea (Daphnia magna), 48 hrs)

XIII. FEDERAL REGULATORY INFORMATION

OSHA Status:	This product is hazardous under the criteria of the Federal OSHA Hazard communication Standard 29 CFR 1910.1200.
TSCA Status:	On TSCA Inventory
CERCLA Reportable Quantity:	None Reported
SARA Title III:	

PREPATION DATE: 02/02/09

Section 302

US EPA Emergency Planning and Community Right-To Know Act (EPCRA)
Extremely hazardous Substance (40 CFR 355, Appendix A) Components: None

Section 311/312 Categories: Acute Health Hazard, Chronic Health Hazard, Fire Hazard

Section 313 Toxic Categories: None

RCRA Status: When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

XIV. OTHER REGULATORY INFORMATION

State Right-To-Know Information: The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right-To-Know Substance Lists:

COMPONENT NAME	WEIGHT	CAS-NO.
Propylene Glycol Monomethyl Ether Acetate	25-50%	108-65-6
Polyester Polyol	>=1%	67815-82-1
Benzene, 1-Chloro-4-(trifluoromethyl)-	10-25%	98-56-6

WARNING: Prop 65

This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Cas #	Chemical Name	%
95-63-6	Trimethylbenzene	Trace

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of E. W. Industries Ltd.. The data on this sheet relates only to the specific material designated herein. E. W. Industries Ltd. assumes no legal responsibility for use or reliance upon these data.

PREPATION DATE: 02/02/09



HARDENER

EnduraFlake High Performance Top Coat (HPTC) Hardener

Material Safety Data Sheet

Date of Preparation: 02/02/09

24 HOUR EMERGENCY ASSISTANCE	GENERAL MSDS ASSISTANCE
CHEMTREC: (800)-424-9300	E.W. INDUSTRIES LTD. (888) 799-3960
HEALTH HAZARD→2 FIRE→3 REACTIVITY→1 SPECIAL→0	Box 336 Imperial, SK S0G 2J0 CHEMTREC – (800) 424-9300
*For acute and chronic health effects refer to the discussion in Section III	

SECTION I : NAME

PRODUCT NAME: EnduraFlake High Performance Top Coat (HPTC) Hardener

CHEMICAL NAME: Hexane, 1,6-diisocyanato-, homopolymer

SYNONYMS: Hexamethylene diisocyanate trimer; Homopolymer of Hexamethylene diisocyanate;
1,6-Hexa-

Methylene diisocyanate based polyisocyanate in organic solvents

CHEMICAL FAMILY: Aliphataic Isocyanate

EINECS NUMBER: 500-060-2

TYPE OF USE: COATINGS

EnduraFlake High Performance Top Coat (HPTC) Resin & Hardener

PREPATION DATE: 02/02/09

INGREDIENTS

HEXANE, 1,6-DIISOCYANATE, HOMOPOLYMER	CAS # 28182-81-2	% 25-65%
4-CHLOROBENZOTRIFLUORIDE	98-56-6	10-55%
METHYL ACETATE	79-20-9	10-55%

SECTION II: COMPOSITION/OCCUPATIONAL EXPOSURE LIMITS

Component Name	CAS #	Source/Date	Value/Units	Type	Skin Notation	Carcinogenic Listing	Concentration by Wt/Mol%		
							Avg.	Min.	Max
Hexane, 1,6-diisocyanato- , homopolyme r	28182-81-2	US (OSHA)/1998	N/L			N/L		99.0	100.0
Hexane, 1,6-diisocyanato-	822-06-0	US (ACGIH)/ 2000 US (OSHA)/ 2000	0.0005 ml/m3 N/L	8 hrs/ TWA	No	N/L			0.5

SECTION III: HAZARD IDENTIFICATION

Emergency Overview: This material is **HAZARDOUS** by OSHA Hazard Communication definition

Signal Word: **Danger**

Hazards: High inhalation hazard – allergic sensitizer. Severe skin irritant; allergic sensitizer. Severe Eye irritant. Moderate ingestion hazard. Irritating to gastrointestinal tract. Mucous membrane irritant. Prolonged exposure may cause allergic sensitization. Prolonged or repeated exposure to vapors may cause lung damage.

Physical State: **Liquid**

Color: **Clear, colorless to slightly yellow.**

Odor: **Odorless**

Odor Threshold: **No Data Available. Odor is not an adequate warning of potentially hazardous ambient air concentrations.**

Potential Health Effects:

Routes of Exposure: **Eye Inhalation Skin**

Signs and Symptoms of Acute Exposure: **High Health Hazard.**

Hexane, 1,6-diisocyanato-sensitizer.
Homopolymer

High inhalation hazard – allergic sensitizer. Skin
Moderate skin irritant.

Hexane, 1,6-diisocyanato-

Respiratory sensitizer. Inhalation irritation. Severe skin
Irritant; allergic sensitizer. Severe eye irritant.

PREPATION DATE: 02/02/09

- Skin:** This material is a severe skin irritant. Causes irritation seen as local redness and possible swelling. Repeated or prolonged skin contact may cause sensitization and an allergic skin reaction.
- Inhalation:** Inhalation would be expected to cause irritation of the nose, mouth, throat and lungs. Inhalation may cause asthma-like symptoms, including coughing, wheezing, tightness of chest, shortness of breath, and headache.
- Eye:** May result in severe irritation and possible damage to the cornea and impairment of vision. The effects of high vapor concentration may vary from slight irritation (with tearing and a burning sensation) to keratitis (Inflammation of the cornea) and impairment of vision.
- Ingestion:** Ingestion not a likely route of exposure. Ingestion may result in irritation of the mouth and digestive tract. Gastroenteritis may result with any or all of the following symptoms: nausea, vomiting, diarrhea, headache.
- Chronic Health Effects:** Prolonged or repeated exposure to vapors may cause lung damage. Repeated over exposure to isocyanates and high one time accidental exposures have been associated with gradual decrease in lung function. Repeated inhalation also may cause allergic sensitization of the respiratory tract, resulting in coughing, wheezing, shortness of breath, chest tightness, and other asthma-like symptoms that may be life-threatening. Repeated skin contact may cause irritation and allergic dermatitis.

Hexane, 1,6-diisocyanato-
respiratory allergic
Homopolymer
wheezing,

progress to

may

Hexane diisocyanate homopolymer is a skin and sensitiz-
er. Sensitive individuals may exhibit skin rash,
tightness of the chest, and difficulty breathing that may
a life-threatening inability to breathe. Chronic inhalation
cause lung damage.

Hexane, 1,6-diisocyanato-
allergic

wheezing,

progress

inhalation may

Hexane diisocyanate (HDI) is a potent skin and respiratory
sensitizer. Sensitive individuals may exhibit skin rash,
tightness of the chest, and difficulty in breathing that may
to a life-threatening inability to breathe. Chronic
cause lung damage.

Conditions Aggravated By Exposure: History or presence of allergic disease. Exposure may aggravate one or more of the following medical conditions: Asthma or asthmatic bronchitic medical history.

IV. FIRST AID MEASURES

- General:** Prolonged observation may be indicated.
- Inhalation:** If overcome by exposure, remove victim to fresh air immediately. Call a physician. Give oxygen or artificial respiration as needed.

PREPATION DATE: 02/02/09

Eye: Immediately flush eyes thoroughly with plenty of water and continue flushing for at least 15 minutes. Seek medical attention if discomfort persists.

Skin: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Flush with lukewarm water for 15 minutes. Seek medical attention if ill effect or irritation develops. Wash clothing before wearing again.

Ingestion: Ingestion unlikely. However, if ingested, give lukewarm water (pint or ½ litre) if victim is fully conscious and alert. Do not induce vomiting. Obtain emergency medical attention.

Physician's Detoxification Procedures: Assess extent and severity of tissue injury by appropriate diagnostic studies and procedures. Bronchodilators may be indicated.

SECTION V: FIRE-FIGHTING MEASURES

FLASH POINT: 91.0 F(32.7 C) Setaflash (ASTM D-243, D-3278, D-3828)

FLAMMABLE LIMITS:

UPPER EXPLOSIVE LIMIT (UEL) (%)	7.0 – Xylene
LOWER EXPLOSIVE LIMIT (LEL) (%)	1.0 – Xylene
UPPER EXPLOSIVE LIMIT (UEL) (%)	7.60 – n-Butyl Acetate
LOWER EXPLOSIVE LIMIT (LEL) (%)	1.38 – n-Butyl Acetate
UPPER EXPLOSIVE LIMIT (UEL) (%)	6.7 – Ethyl Benzene
LOWER EXPLOSIVE LIMIT (LEL) (%)	0.8 – Ethyl Benzene

AUTO-IGNITION TEMPERATURE: Approximately 752 F (400 C) – similar material

EXTINGUISHING MEDIA: Dry chemical; Carbon Dioxide; Foam; Water spray for large fires.

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, HDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Isolate from heat electrical equipment, sparks and open flame. Closed container may explode when exposed to extreme heat or burst when contaminated with water (co2 evolved). Solvent vapors may be heavier than air. Stagnant air may cause vapors to accumulate and travel along with the ground to an ignition source which may result in a flashback to the source of the vapors.

UNUSUAL FIRE/EXPLOSION HAZARDS: The organic solvents used in this product are considered severe fire hazards. Vapor/air mixtures are explosive above the flash point.

PREPATION DATE: 02/02/09

SECTION VI: ACCIDENTAL RELEASE MEASURES

Release Response: Reactive. May release toxic materials/contaminate water supplies/create human health hazard. Equip responders with proper protection. Use self-contained breathing apparatus and body-covering protective clothing. Evacuate/limit access. Extinguish ignition sources; stop release; prevent flow to sewers or public waters. Notify fire and environmental authorities. Blanket with fire fighting foam. Avoid water for clean-up or use in large quantities due to reactivity. Impound/recover large land spill; soak u small spill with inert solids. Use suitable disposal containers. Reacts with water. Contain/collect rapidly to minimize dispersion. Disperse residue to reduce aquatic harm.

<u>Regulation</u>	<u>Component</u>	<u>TPQ</u>	<u>RQ</u>
EPA/DOT RQ	Hexane, 1,6-diisocyanato-/CAS#822-06-0		
45.4KG/100 lbs.			

SECTION VII: HANDLING AND STORAGE

Storage Conditions: All containers should be labeled to warn against exposure. Store in tightly closed/properly vented containers with vents directed to locations removed from potential personnel exposure. Store below 113°F (45°C).

Handling Procedures: Handle with care. Use special care when handling/transporting samples. Handle empty containers with care – residue may be combustible. For industrial use only. Keep container tightly closed when not in use. When cleaning or repairing equipment contaminated with this material, total encapsulating impervious protective suits, gloves, and boots should be worn to prevent any contact. Material sampling procedures should avoid vapor inhalation and skin/eye contact and only be conducted with proper protective equipment. A positive pressure self-contained breathing apparatus and/or a supplied air respirator should be used.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust in addition to general room ventilation may be required to meet exposure limit(s).

Personal Protection:

Inhalation: If exposure can exceed the exposure limit(s), use only supplied air respirator, recommended or approved by appropriate local, state or international agency, operated in a positive pressure mode.

Skin: Wear chemical resistant gloves such as: Nitri-knit™. Nitrile Butyl rubber. 4H™(PE/EVAL). Or Neoprene. Impervious protective suit with integral or tight-fitting gloves, boots, and full head and face protection must be worn. The equipment must be cleaned thoroughly after each use.

Eye: Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to splashing/spraying liquid, airborne particles, or vapor.

Other Hygienic Practices: Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

PREPATION DATE: 02/02/09

Recommended Work Practices: Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove soiled clothing/wash thoroughly before reuse.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY	: -1.1, @ 25°C/77°F
VAPOR DENSITY	: No Data Available
BOILING PRESSURE	: -194.4°C (382°F)
pH	: NOT APPLICABLE
APPEARANCE	: CLEAR
COLOR	: COLORLESS
STATE	: LIQUID
ODOR CHARACTERISTIC	: SWEET
pH	: NOT APPLICABLE
VAPOR PRESSURE	: -0.000075mm Hg @ 20°C/68°F based on polyisocyanate
VISCOSITY	: 1,800-13,000 mPa.s, @ 25°C/77°F
SOLUBILITY IN WATER	: Reacts
OCTANOL/WATER PARTITION COEFFICIENT IN KOW	: Not applicable
MELTING/FREEZING POINT	: No Data Available
DRY POINT	: No Data Available
MOLECULAR WEIGHT	: (Polyisocyanate) 350-500 g/mol

SECTION X: STABILITY AND REACTIVITY

Chemical Stability: This material is stable when properly handled and stored.

Conditions to Avoid: Heat, sparks, open flame, other ignition sources, and poor ventilation. Contact with incompatible materials in a closed system – may lead to pressure build-up and possible rupture of container or system.

Incompatibility with: Water, Amines, alcohols. Strong oxidizing agents.

Decomposition Products: during instances of thermal decomposition or combustion, the liberation of diisocyanate vapors and other irritating, highly toxic gases may be generated and/or released.

Hazardous Polymerization: Self-polymerization will occur when exposed to temperatures above 240°C/464°F.

Reactions with Air and Water: Reacts with water, releasing CO₂.

SECTION XI: TOXICOLOGICAL INFORMATION

Product Summary: Repeated skin contact may cause irritation and allergic dermatitis. Repeated inhalation also may cause allergic sensitization or the respiratory tract, resulting in coughing, wheezing, shortness of breath, chest tightness, and other asthma-like symptoms that may be life-threatening. Interaction with other isocyanates may cross react and cause similar sensitization responses.

Component Summary:

Hexane, 1,6-diisocyanato-, homopolymer

PREPATION DATE: 02/02/09

LC50 (Inhl)- rat: 3124 MG/KG
Oral LD50-rat: >5000 MG/KG
Oral LD50-rabbit: 900 MG/KG
Oral LD50-rabbit: >2000 MG/KG

Repeated Dose Toxicity: Hexane diisocyanate homopolymer is a skin and respiratory allergic sensitizer. Sensitive individuals may exhibit skin rash, wheezing, tightness of the chest, and difficulty breathing that may progress to a life-threatening inability to breathe. Chronic inhalation may cause lung damage.

Hexane, 1,6-diisocyanato

LC50 (Inhl) -mouse: 30 MG/M3
LC50 (Oral) – rat: 745.5 MG/KG
LC50 (Oral) – mouse: 350 MG/KG
LD50 (Skin) - rabbit: 598.5 MG/KG

Repeated Dose Toxicity: Hexane diisocyanate (HDI) is a potent skin and respiratory allergic sensitizer. Sensitive individuals may exhibit skin rash, wheezing, tightness of the chest, and difficulty breathing that may progress to a life-threatening inability to breathe. Chronic inhalation may cause lung damage.

SECTION XII: ECOLOGICAL INFORMATION

Ecotoxicity: No Data Available
Environmental Fate: No Data Available
Bioaccumulation: No Data Available
Biodegradation: No Date Available

SECTION XIII: DISPOSAL CONSIDERATIONS

Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Avoid contact with water. Aqueous wastes may not biograde. Do not treat biologically; may poison/upset plant biomass. Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal.

SECTION XIV: TRANSPORT INFORMATION

TECHNICAL SHIPPING NAME: Polyisocyanate containing Xylene and Butyl Acetate
FREIGHT CLASS BULK: Isocyanate
FREIGHT CLASS PACKAGE: Chemicals, NOI (Isocyanate), NMFC 60000
PRODUCT LABEL: Product Label Established

DOT (DOMESTIC SURFACE)

PROPER SHIPPING NAME: Resin Solution
HAZARD CLASS OR DIVISION: 3

EnduraFlake High Performance Top Coat (HPTC) Resin & Hardener

PREPATION DATE: 02/02/09

UN/NA NUMBER: UN 1866
PACKING GROUP: III
DOT PRODUCT RQ lbs (kgs): 800 lbs (362.9 kgs)
HAZARD LABEL(S): Flammable Liquid
HAZARD PLACARD(S): Flammable

IMO/IMDG CODE (OCEAN)

PROPER SHIPPING NAME: Resin Solution
HAZARD CLASS OR DIVISION: 3
UN/NA NUMBER: UN 1866
PACKING GROUP: III
HAZARD LABEL(S): Flammable Liquid
HAZARD PLACARD(S): Flammable

ICAO/IATA (AIR)

PROPER SHIPPING NAME: Resin Solution
HAZARD CLASS OR DIVISION: 3
UN/NA NUMBER: UN 1866
SUBSIDIARY RISK: None
PACKING GROUP: III
HAZARD LABEL(S): Flammable Liquid
RADIOACTIVE: Non-Radioactive
PASSENGER AIR – MAX. QTY.: 60L
PASSENGER PACKING INSTRUCTION: 309
CARGO AIR – MAX. QTY.: 220L
CARGO AIR PACKING INSTRUCTION: 310

SECTION XV: REGULATORY INFORMATION

Regulatory Advisory: This material contains a component(s) with known CAS numbers classified as hazardous substances subject to the reporting of CERCLA (40 CFR 302) and/or to the release reporting requirements of SARA (Section 302) based on reportable quantities (RQs) (SEE SECTION 6)

Regulatory Status: All components of this product are listed or are exempt from listing on the TCA 8(b) inventory. If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

EnduraFlake High Performance Top Coat (HPTC) Resin & Hardener

PREPATION DATE: 02/02/09

SARA – Section 313 Emissions Reporting: This material contains the following chemicals with known CAS numbers subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

<u>Component Summary</u>	<u>Reporting Threshold</u>
Hexane, 1,6-diisocyanato-/CAS#822-06-0	1.0%

SARA – Section 311/312: Based upon available information, this material and/or components are classified as the following health and/or physical hazards according to Section 311 & 312:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard
Reactive

State Reporting: This material is known to contain chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition as follows:

Benzene	CAS # 98-56-5	Trace
---------	---------------	-------

A Volatile Organic Compound (VOC) is any volatile compound of carbon excluding methane, carbon monoxide, carbonic acid, metallic carbides or carbonates, ammonium carbonate, 1,1-trichloromethane, methylene chloride, (FC-23), (CFC-113), (CFC-22), (CFC-114) and (CFC-115). By this definition, this is not a VOC material.

SECTION XVI: OTHER INFORMATION

NAME AND ADDRESS:
E.W. INDUSTRIES LTD.
P.O. BOX 336
Imperial, SK S0G 2J0
1-888-799-3960

Disclaimer of Responsibility: This document is generated for the purpose of distributing health, safety, and environmental data. It is not a specification sheet nor should any displayed data be construed as a specification. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

EnduraFlake High Performance Top Coat (HPTC) Resin & Hardener

PREPATION DATE: 02/02/09