



**ENDURAFLAKE  
TOP COAT  
PART A  
ISOCYANATE**

**Safety Data Sheet**

Revision date: 2015/08/14

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**EW INDUSTRIES**

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

[www.SierraStone.com](http://www.SierraStone.com)

**1. Identification**

**Product identifier used on the label**

**ENDURAFLAKE TOP COAT - PART A - ISOCYANATE**

**Recommended use of the chemical and restriction on use:**

**Floor Coating**

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

**Details of the supplier of the safety data sheet**

Company:

EW Industries  
Box 336  
Imperial, SK Canada S0G 2J0

1-888-799-3960

**Emergency telephone number**

CHEMTREC: 1-800-424-9300

**Other means of identification**

Chemical family: Modified Aliphatic Isocyanate



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### 2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

Acute Toxicity	4	(Inhalation - mist)
Skin Sensitization	1	
Specific Target Organ Toxicity – Single Exposure	3	(Irritating to respiratory system)
Aquatic Acute	3	
Eye Damage/Irritation	2a	

Label Elements

Pictogram:



Signal Word: Warning

Hazard Statement:

- Flammable
- Harmful if inhaled.
- May cause an allergic skin reaction.
- May cause respiratory irritation.
- Harmful to aquatic life.
- Causes serious eye irritation
- May cause drowsiness or dizziness

Precautionary Statements (Prevention):

- Wear eye/face protection.
- Wear protective gloves.
- Use only outdoors or in a well-ventilated area.
- Do not breathe dust/gas/mist/vapors.
- Avoid release to the environment.
- Contaminated work clothing should not be allowed out of the workplace.
- Wash with plenty of water and soap thoroughly after handling
- Keep away from heat, hot surfaces, open flames, sparks – No smoking



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Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical, lighting, ventilating equipment  
Use only non-sparking tools  
Take Precautionary measures against static discharge

### Precautionary Statements (Response):

If eye or skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN (or hair): Wash with plenty of soap and water.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Take off contaminated clothing and wash before reuse.  
In case of fire: Use dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>) for extinction

### Precautionary Statements (Storage):

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Keep cool

### Precautionary Statements (Disposal):

Dispose of contents/container to hazardous or special waste collection point.

### Hazards not otherwise classified

No specific dangers known

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

### Emergency overview

#### WARNING:

The product may be toxic to fish and aquatic organisms. Do not release any waste streams to surface water (to rain water ditch, for example).  
May cause sensitization by skin contact. HARMFUL IF INHALED.  
CONTAINS ISOCYANATES. INHALATION OF ISOCYANATE MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSITIZATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING. ANIMAL TESTS INDICATE THAT SKIN CONTACT MAY PLAY A ROLE IN CAUSING RESPIRATORY SENSITIZATION.  
Use with local exhaust ventilation. Wear protective clothing.



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Wear full face shield if splashing hazard exists.

### 3. Composition / Information on Ingredients

Components	CAS Number	Concentration (Weight)
Poly(hexamethylene diisocyanate)	28182-81-2	40-75 %
4-CHLOROBENZOTRIFLUORIDE	98-56-6	15-35 %
Proprietary	Proprietary	< 20 %

### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

Immediately remove contaminated clothing.

##### If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

##### If on skin:

Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

##### If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Seek medical attention.

##### If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

##### Most important symptoms and effects, both acute and delayed:

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.



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### Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

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## 5. Fire-Fighting Measures

### **Extinguishing media**

Suitable extinguishing media: Preferable: Alcohol resistant foam. Water spray, CO2  
Unsuitable extinguishing media: Solid water jet ineffective as extinguishing medium

### **Special hazards arising from the substance or mixture**

Hazards during firefighting: harmful vapors  
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

### **Advice for firefighters**

Protective equipment for fire-fighting:  
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### **Further information:**

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

### **Fire Hazard:**

Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Reactions involving a fire hazard: see "Reactivity Hazard"

### **Explosion Hazard:**

DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk. May be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

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## 6. Accidental release measures

### **Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing.

### **Environmental precautions**

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

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### Methods and material for containment and cleaning up

Spills should be contained, solidified, and placed in suitable containers for disposal.

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## 7. Handling and Storage

### Precautions for safe handling

Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark/explosion proof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Avoid prolonged and repeated contact with skin. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

### Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place away from heat sources, direct sunlight.

#### Storage stability:

If moisture enters isocyanate containers, CO<sub>2</sub> forms and pressure builds up.

Storage Temperature: 15 – 20 C

#### Storage Area:

Store in a cool area. Keep out of direct sunlight. Store in a dry area. Store in a dark area. Ventilation at floor level. Fireproof storeroom. Provide for an automatic sprinkler system. Provide for a tub to collect spills. Provide the tank with earthing. Meet the legal requirements.

#### Special rules on packaging:

SPECIAL REQUIREMENTS: Closing with pressure relief valve: clean, opaque, correctly labelled, meet the legal requirements. Secure fragile packagings in solid containers.

#### Packaging materials:

SUITABLE MATERIAL: steel, stainless steel, carbon steel, aluminium, iron, copper, nickel, bronze, glass. MATERIAL TO AVOID: synthetic material

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## 8. Exposure Controls/Personal Protection



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### Engineering Measures

Provide readily accessible eye wash stations and safety showers.

Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits

### Personal protective equipment

#### Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapor/particulate respirator. Do not exceed the maximum use concentration for the respirator face piece/cartridge combination. For emergency or non-routine, high exposure situations, use a NIOSH-certified full face piece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

#### Hand protection:

Chemical resistant protective gloves

#### Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists

#### General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid inhalation of mists. Contact with eyes and skin must be avoided.

Occupational Exposure limit(s)

Benzene, 1-chloro-4 (trifluoromethyl)	Time Weighted Average (TWA): 8 hr	25 ppm
1, 6 – hexamethylene diisocyanate	Time Weighted Average (TWA): ACGIH TLV	0.005 ppm

## 9. Physical and Chemical Properties

Form:	Liquid
Odor:	Aromatic, fruity
Color:	Clear to yellow
pH value:	N/A
Melting point:	No data available
Boiling point:	139 °C
Flash point:	45 °C



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Flammability:	Combustible
Lower explosion limit:	Not applicable
Upper explosion limit:	Not applicable
Vapor pressure:	N/A
Density:	N/A
Viscosity, Dynamic	800-1500 CPS
Solubility in Water	Hydrolyzes
Evaporation rate:	Not determined
Volatile Organic Compounds:	< 5 g/l (per AQMD)

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### 10. Stability and Reactivity

**Corrosion to metals:**

Corrosion effect on metals are not anticipated

**Chemical Stability:**

Stable under normal conditions.

**Conditions to avoid:**

Avoid moisture. Avoid sources of ignition. Oxidizers

**Materials to avoid:**

Water, Alcohols, Amines

**Hazardous decomposition products:**

Chlorine and fluorine containing gases can be produced.

**Possibility of hazardous Reactions/Reactivity:**

Reacts with alcohols. Reacts with amines. Reacts with substances which contain active hydrogen. Reacts with water, with formation of carbon dioxide. The formation of gaseous decomposition products builds up pressure in tightly closed containers.

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### 11. Toxicological information

**Primary routes of exposure**

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact.

Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

**Acute Toxicity/Effects**

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### Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

### Oral

Type of value: LD50

Species: rat

Value: > 5,000 mg/kg

### Inhalation

Type of value: LC50 Species: rat

Value: (OECD Guideline 403) Exposure time: 4 h

The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm).

### Dermal

Type of value: LD50 Species: rat

No data available.

### Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin. Irritating to respiratory system.

### Skin

Species: rabbit Result: non-irritant

Method: OECD Guideline 404

### Eye

Species: rabbit Result: non-irritant

### Sensitization

Assessment of sensitization: Caused skin sensitization in animal studies.

Guinea pig maximization test Species: guinea pig

Result: sensitizing

Sensitizing effect in animal tests

### Aspiration Hazard

No aspiration hazard expected.

### Chronic Toxicity/Effects



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### Repeated dose toxicity

Assessment of repeated dose toxicity: Based on available data, the classification criteria are not met.

### Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

#### Toxicity to fish

LC0 (96 h)  $\geq$  100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

#### Aquatic invertebrates

ECO (48 h)  $\geq$  100 mg/l, Daphnia magna (Directive 92/69/EEC, C.2, static)

The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Limit concentration test only (LIMIT test). The details of the toxic effect relate to the nominal concentration.

#### Aquatic plants

EL50 (72 h)  $>$  100 mg/l (growth rate), Desmodium subspicatus (OECD Guideline 201, static)

The product may hydrolyse. The test result may be partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. The details of the toxic effect relate to the nominal concentration.

#### Chronic toxicity to fish

Study does not need to be conducted.

#### Chronic toxicity to aquatic invertebrates

Study does not need to be conducted.

#### Assessment of terrestrial toxicity



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Study does not need to be conducted.

### Microorganisms/Effect on activated sludge

#### Toxicity to microorganisms

OECD Guideline 209 static

Activated sludge, domestic/EC20 (3 h): 134.5 mg/l

The product may hydrolyse. The test result may be partially due to degradation products. The details of the toxic effect relate to the nominal concentration.

### Persistence and degradability

#### Assessment biodegradation and elimination (H2O)

Not readily biodegradable (by OECD criteria). The product is unstable in water. The elimination data also refer to products of hydrolysis.

#### Elimination information

1 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

#### Assessment of stability in water

In contact with water the substance will hydrolyze rapidly.

#### Information on Stability in Water (Hydrolysis)

Study does not need to be conducted.

### Bioaccumulative Potential

#### Assessment bioaccumulation potential

Does not significantly accumulate in organisms.

#### Bioaccumulation potential

Study scientifically not justified.

### Mobility in soil

#### Assessment transport between environmental compartments

The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

### Additional information

Additional Remarks Environment Fate & Pathway:



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Treatment in biological waste water treatment plants has to be performed according to local and administrative regulations.

Other Ecotoxicological advice:

Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed.

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### 13. Disposal Considerations

Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

**Container disposal:**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

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### 14. Transport Information

**Land transport**

USDOT

Proper Shipping Name:	Resin Solution
Hazard Class or Division:	3
UN/NA Number:	1866
Packaging Group:	III
Hazard Label(s):	Warning, Flammable Liquid
Hazard Placards(s):	Flammable

**Sea transport**

IMDG

Proper Shipping Name:	Resin Solution
Hazard Class or Division:	3
UN/NA Number:	1866
Packaging Group:	III
Hazard Label(s):	Warning, Flammable Liquid
Hazard Placards(s):	Flammable

**Air transport**

IATA/ICAO

Proper Shipping Name:	Resin Solution
Hazard Class or Division:	3
UN/NA Number:	1866
Packaging Group:	III



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Hazard Label(s): Warning, Flammable Liquid  
Hazard Placards(s): Flammable

### 15. Regulatory Information

#### Federal Regulations:

Chemical: TSCA, US - Released/Listed

Regulation	CAS Number	Chemical Name
MA, NJ	822-06-0	1, 6-hexamethylene diisocyanate
PA, NJ	98-56-6	4-Chloro- $\alpha,\alpha,\alpha$ -trifluorotoluene

CA Prop 65: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER

### 16. Other Information

#### NFPA Hazard Codes:

Health : 2  
Fire : 2  
Reactivity : 1  
Special : 0

#### SDS Prepared by:

EW Industries Ltd.

The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication as part of EW Industries Ltd's Product Safety Program. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information obtained herein. Data sheets are available for all EW Industries products. You are urged to obtain data sheets for all EW Industries' products you buy, process, use or distribute and you are encouraged and requested to advise those who may come in contact with such products of the information contained therein.

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