1. IDENTIFICATION

Product identifier
Product Code F073-0073B
Product Name ENDURA-SHIELD CONVERTER

Other means of identification
Common Name SERIES 73, PART B
Synonyms None

Recommended use of the chemical and restrictions on use
Recommended Use industrial paint.
Uses advised against Consumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet
Manufacturer Address Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 816-474-3400
Distributor Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203, Boisbriand, Quebec Canada J7G 2T3
Emergency telephone number Company Phone Number Tnemec Regulatory Dept: 816-474-3400
24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification
OSHA Regulatory Status This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2B</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard statements
Causes eye irritation
May cause respiratory irritation. May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
Flammable liquid and vapor
Precautionary Statements

Prevention
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Keep cool

Response
Get medical advice/attention if you feel unwell
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Keep away from children

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazardous not otherwise classified (HNOC)

Other information
May be harmful in contact with skin
Toxic to aquatic life with long lasting effects
SEE SAFETY DATA SHEET

Acute Toxicity

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER</td>
<td>28182-81-2</td>
<td>30 - &lt;60%</td>
</tr>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE</td>
<td>98-56-6</td>
<td>30 - &lt;60%</td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER</td>
<td>822-06-0</td>
<td>0.1 - &lt;1%</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice
Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Inhalation
Remove affected individual to fresh air. Treat symptomatically. If breathing is difficult, administer oxygen. If breathing has stopped give artificial respiration. Consult a physician.

Ingestion
If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aider
Use personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed
Breathing difficulties. Asthma-like and/or skin allergy-like symptoms.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam, carbon dioxide, and dry chemical.

Unsuitable extinguishing media
Water.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapours. In the event of fire and/or explosion do not breathe fumes.

Hazardous combustion products
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Avoid contact with eyes, skin and clothing. Use personal protective equipment. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Ensure adequate ventilation.

Environmental Precautions

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment
Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up
If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.
7. HANDLING AND STORAGE

Precautions for safe handling

Handling
Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling. Do not breathe vapours or spray mist.

Conditions for safe storage, including any incompatibilities

Storage
Close container after each use. Keep away from heat, sparks and flame. Use only in an area containing flame proof equipment. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Keep out of the reach of children.

Incompatible products

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE 98-56-6</td>
<td>TWA: 2.5 mg/m³</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>TWA: 0.005 ppm</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering measures
Sufficient ventilation, in volume and pattern, should be provided through both local and general exhaust to keep the air contaminant concentration below current applicable OSHA Permissible Exposure Limits (PEL) and ACGIH's Threshold Limit Values (TLV). Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Use chemical resistant splash type goggles. If splashes are likely to occur, wear face-shield.

Skin and body protection
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection
INDIVIDUALS WITH LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES MUST NOT BE EXPOSED TO VAPOR OR SPRAY MIST. Do not breathe vapor or spray mist. Wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application unless air monitoring demonstrates vapor/mist levels are below applicable limits. An airline respirator (TC 19C NIOSH/MSHA) is recommended. A vapor-particulate respirator (TC 23C NIOSH/MSHA) may be appropriate where air monitoring demonstrates vapors are less than ten times the applicable exposure limits and the isocyanate concentration is less than its applicable exposure limit. The use of an air-supplied respirator is mandatory whenever the airborne concentration of isocyanate monomer is unknown.

General hygiene considerations
Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES
### Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>clear</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>aromatic</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td><strong>Values</strong></td>
<td><strong>Remarks</strong></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>139 °C / 282.0 °F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>40 °C / 104.0 °F</td>
<td>Pensky Martens - Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>Approximate</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>10.5</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.23059</td>
<td>g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in cold water</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>60 centipoises</td>
<td>approx</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td><strong>Other Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>10.26311 lbs/gal</td>
<td></td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td>0 lbs/gal</td>
<td></td>
</tr>
<tr>
<td>Total volatiles weight percent</td>
<td>49 %</td>
<td></td>
</tr>
<tr>
<td>Total volatiles volume percent</td>
<td>44.9 %</td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Reactivity**
Water reactive, Amines, Alcohols

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
None under normal processing.

**Conditions to avoid**
Protect from water. Heat, flames and sparks.

**Incompatible materials**
Incompatible with strong acids and bases, Water, Alcohols, Amines, Strong oxidizing agents

**Hazardous decomposition products**
Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

### 11. TOXICOLOGICAL INFORMATION
Information on Likely Routes of Exposure

**Inhalation**
May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Contains isocyanate monomer. If subject to spray application, engineering and administrative controls must be instituted to maintain an exposure level below .005 ppm. If these controls are not adequate, the use of an air-supplied respirator is mandatory. May cause sensitization by inhalation.

**Eye contact**
Causes eye irritation.

**Skin contact**
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Irritating to skin.

**Ingestion**
Harmful if swallowed.

### Chemical Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER 28182-81-2</td>
<td>-</td>
<td>-</td>
<td>= 18500 mg/m³ (Rat) 1 h</td>
</tr>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE 98-56-6</td>
<td>= 13 g/kg (Rat)</td>
<td>&gt; 2 mL/kg (Rabbit)</td>
<td>= 33 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>= 710 µL/kg (Rat)</td>
<td>= 593 mg/kg (Rabbit)</td>
<td>= 0.06 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

**Information on Toxicological Effects**

**Symptoms**
Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Delayed and Immediate Effects as Well as Chronic Effects from Short and Long-term Exposure**

**Skin corrosion/irritation**
Irritating to skin.

**Eye damage/irritation**
Irritating to eyes.

**Chronic Toxicity**
Avoid repeated exposure. Contains isocyanates. May produce an allergic reaction.

**Sensitization**
May cause sensitization of susceptible persons.

**Mutagenicity**
No information available.

**Carcinogenicity**
There are no known carcinogenic chemicals in this product.

**Reproductive effects**
No information available.

**STOT - single exposure**
May cause disorder and damage to the respiratory system, liver, kidney.

**STOT - repeated exposure**
Causes damage to organs through prolonged or repeated exposure, liver, kidney.

**Aspiration hazard**
Based on product level data, this product does not meet the requirement to be classified as an aspiration hazard. However, this product contains an ingredient that may cause aspiration if swallowed.

**Acute Toxicity**
1E-06 % of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Toxic to aquatic life with long lasting effects

50.64003 % of the mixture consists of components(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE 98-56-6</td>
<td>11.5 - 15.8: 48 h Lepomis macrochirus mg/L LC50 static</td>
<td>3.68: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER 822-06-0</td>
<td>26.1: 96 h Brachydanio rerio mg/L LC50 static</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and degradability**
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE 98-56-6</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Other Adverse Effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods
Keep container tightly closed. If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.

US EPA Waste Number
No data available

California Hazardous Waste Status
Not applicable

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name paint in oil Not regulated
Description Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

IMDG/IMO
Proper Shipping Name paint, Not regulated

Additional information Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes of Transportation.

15. REGULATORY INFORMATION

International Inventories
TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances  
KECL - Korean Existing and Evaluated Chemical Substances  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
AICS - Australian Inventory of Chemical Substances  

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

**Chemical name**  
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER  

**SARA 313**  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous**  
Categorization  
- Acute Health Hazard: Yes  
- Chronic Health Hazard: Yes  
- Fire Hazard: Yes  
- Sudden Release of Pressure Hazard: No  
- Reactive Hazard: No  

**Clean Water Act**  
No information available  

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0</td>
<td>100 lb</td>
<td>RQ 100 lb final RQ</td>
<td></td>
</tr>
</tbody>
</table>

**California Prop. 65**  
This product does not contain any Proposition 65 chemicals  

**California SCAQMD Rule 443**  
Contains Photochemically Reactive Solvent  

**State Right-to-Know**  

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CHLOROBENZOTRIFLUORIDE - 98-56-6</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER - 822-06-0</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**16. OTHER INFORMATION**  

**NFPA**  
Health 2  
Flammability 2  
Instability 1  
Physical hazard  

**HMIS (Hazardous Material Information System)**  
Health 2*  
Flammability 2  
Reactivity 1  

Prepared By: Tnemec Regulatory Dept: 816-474-3400  
Revision Date: 11-Jan-2017  
Revision Summary: 4 5 7 10 11 14 6 9 8 1  
Disclaimer:  
For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.  
To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of 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 health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

End of SDS