1. IDENTIFICATION

Product identifier
Product Code: F264-0264A
Product Name: ELASTO-SHIELD BLACK

Other means of identification
Common Name: SERIES 264 PART A
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
Emergency telephone number: 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>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germ cell mutagenicity</td>
<td>1B</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1B</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>1</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>3</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
May cause genetic defects
May cause cancer
Causes damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Flammable liquid and vapor
Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/mixing/equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do NOT induce vomiting
In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage
Store locked up
Store in a well-ventilated place. Keep cool
Keep away from children

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

Hazards 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
36.2 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT (PETROLEUM) FUMES</td>
<td>8052-42-4</td>
<td>30 - &lt;60%</td>
</tr>
<tr>
<td>AROMATIC HYDROCARBON MIXTURE</td>
<td>64742-95-6</td>
<td>1 - &lt;10%</td>
</tr>
<tr>
<td>AMINE COMPOUNDS</td>
<td>-</td>
<td>1 - &lt;10%</td>
</tr>
<tr>
<td>MINERAL SPIRITS (STODDARD SOLVENT)</td>
<td>8052-41-3</td>
<td>1 - &lt;10%</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME</td>
<td>1333-86-4</td>
<td>1 - &lt;10%</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
If symptoms persist, call a physician.

Eye contact
Rinse thoroughly with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.

Skin contact
Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Inhalation
Remove to fresh air. Oxygen or artificial respiration if needed.

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

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide. Foam. 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. Carbon oxides. Hydrocarbons.

Protective equipment and precautions for firefighters
Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance.

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.

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**

Close container after each use. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke when using this product. If splashes are likely to occur, wear goggles. Wear protective gloves/clothing. Do not burn, or use a cutting torch on, the empty drum. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage**

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

**Incompatible products**

Strong oxidizing agents.

### 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>ASPHALT (PETROLEUM) FUMES 8052-42-4</td>
<td>TWA: 0.5 mg/m³</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MINERAL SPIRITS (STODDARD SOLVENT) 8052-41-3</td>
<td>TWA: 100 ppm</td>
<td>TWA: 100 ppm TWA: 525 mg/m³ TWA: 500 ppm TWA: 2900 mg/m³</td>
<td>20000 mg/m³</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME 1333-86-4</td>
<td>TWA: 3 mg/m³</td>
<td>TWA: 3.5 mg/m³</td>
<td>1750 mg/m³</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**

Safety glasses with side-shields 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**

Use only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use.

**General hygiene considerations**

When using, do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing. Avoid contact with eyes, skin and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

### 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>black</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Petroleum distillates</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></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>154 °C / 310.0 °F</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>38 °C / 101.0 °F</td>
<td>Pensky Martens - Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>N/A</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>1.0</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.09198</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>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
<td></td>
</tr>
</tbody>
</table>

Other Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>9.10714 lbs/gal</td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td>1.08375 lbs/gal</td>
</tr>
<tr>
<td>Total volatiles weight percent</td>
<td>11.9 %</td>
</tr>
<tr>
<td>Total volatiles volume percent</td>
<td>12 %</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.09198</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in cold water</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No data available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
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. Carbon oxides. Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure
Inhalation
May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact
Contact with eyes may cause irritation.

Skin contact
Substance may cause slight skin irritation. Irritating to skin.

Ingestion
Harmful if swallowed.

Information on toxicological effects

Symptoms
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin disorders.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity
NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Sensitization
No information available.

Mutagenicity
May cause genetic defects.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT (PETROLEUM) FUMES 8052-42-4</td>
<td></td>
<td>Group 2B</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME 1333-86-4</td>
<td>A3</td>
<td>Group 2B</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

Reproductive effects
No information available.

STOT - single exposure
No information available

STOT - repeated exposure
No information available

Target organ effects
Central nervous system, Eyes, kidney, respiratory system, Skin.

Aspiration hazard
Not applicable.

Acute Toxicity
36.2 % 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

88.1 % 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>AROMATIC HYDROCARBON MIXTURE 64742-95-6</td>
<td>9.22: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>9.22: 96 h Oncorhynchus mykiss mg/L LC50</td>
<td>6.14: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME 1333-86-4</td>
<td></td>
<td></td>
<td>5600: 24 h Daphnia magna mg/L EC50</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>ASPHALT (PETROLEUM) FUMES</td>
<td>6</td>
</tr>
<tr>
<td>MINERAL SPIRITS (STODDARD SOLVENT)</td>
<td>3.16</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.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name: paint in oil NOT REGULATED

UN/ID no. 1263
Proper Shipping Name: PAINT
Hazard Class: 3
Packing Group: III
ERG Code: 366

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

15. REGULATORY INFORMATION

International Inventories

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does Not Comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does Not Comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Complies</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

*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):

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:

SARA 311/312 Hazardous Categorization

<table>
<thead>
<tr>
<th>Category</th>
<th>Acute Health Hazard</th>
<th>Chronic Health Hazard</th>
<th>Fire Hazard</th>
<th>Sudden Release of Pressure Hazard</th>
<th>Reactive Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

California Prop. 65

WARNING: This product can expose you to the following chemicals which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT (PETROLEUM) FUMES - 8052-42-4</td>
<td>.</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME - 1333-86-4</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

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>ASPHALT (PETROLEUM) FUMES 8052-42-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MINERAL SPIRITS (STODDARD SOLVENT) 8052-41-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>CARBON BLACK DUST &amp; FUME 1333-86-4</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

NFPA Health 2 Flammability 2 Instability 1 Physical hazard *
HMIS (Hazardous Material Information System)

Prepared By Tnemec Regulatory Dept: 816-474-3400
Revision Date 09-Jun-2015
Revision Summary 9 4 5 7 10 8 11 14 15 2
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
1. IDENTIFICATION

Product identifier
Product Code B264-0265B
Product Name F264/F265 CONVERTER

Other means of identification
Common Name SERIES 264/265, PART B
Synonyms None

Recommended use of the chemical and restrictions on uses
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 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>Acute toxicity - Inhalation (Vapors)</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</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>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing cancer
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure
Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves
Do not breathe dust/fume/gas/mist/vapors/spray

Response
If exposed or concerned: Get medical advice/attention
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: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

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

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

Hazards not otherwise classified (HNOC)

Other information
SEE SAFETY DATA SHEET
Acute Toxicity 30 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) REACTIVE MONOMER</td>
<td>101-68-8</td>
<td>30 - &lt;60%</td>
</tr>
<tr>
<td>NON-HAZARDOUS RESIN</td>
<td>BQ018</td>
<td>30 - &lt;60%</td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER</td>
<td>26447-40-5</td>
<td>10 - &lt;30%</td>
</tr>
<tr>
<td>TRIETHYL PHOSPHATE</td>
<td>78-40-0</td>
<td>1 - &lt;10%</td>
</tr>
</tbody>
</table>

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

General advice If symptoms persist, call a physician.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.

Skin contact Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

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

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide. Foam. 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

Protective equipment and precautions for firefighters
Use water spray to cool unopened containers. In the event of fire, wear self-contained breathing apparatus. Keep away from heat/sparks/open flames/hot surfaces. MAY CAUSE HEAT AND PRESSURE BUILD-UP IN CLOSED CONTAINERS. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance.

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.

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

Wear personal protective equipment. 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. Close container after each use. When used in a mixture, read the labels and safety data sheets of all components. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage

Keep container tightly closed in a dry and well-ventilated place. 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>DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER 101-68-8</td>
<td>TWA: 0.005 ppm</td>
<td>Ceiling: 0.02 ppm Ceiling: 0.2 mg/m$^3$</td>
<td>75 mg/m$^3$</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER 26447-40-5</td>
<td>-</td>
<td>Ceiling: 0.02 ppm Ceiling: 0.2 mg/m$^3$</td>
<td>NIOSH IDLH: Immediately Dangerous to Life or Health</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

Safety glasses with side-shields 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
Handle in accordance with good industrial hygiene and safety practice. Avoid breathing dust created by cutting, sanding, or grinding.

### 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>Slight</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No data available</td>
<td>Literary Reference</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>Pensky Martens - Closed Cup</td>
</tr>
<tr>
<td>Flash point</td>
<td>218 °C / 425 °F</td>
<td>No data available</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>No data available</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td></td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.20233</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>No data available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</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>No data available</td>
<td></td>
</tr>
</tbody>
</table>

#### Other Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>10.00522 lbs/gal</td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td>.000 lbs/gal</td>
</tr>
<tr>
<td>Total volatiles weight percent</td>
<td>.0000 %</td>
</tr>
<tr>
<td>Total volatiles volume percent</td>
<td>.0000 %</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No information available</td>
</tr>
<tr>
<td>Volatile organic compounds (VOC) content</td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

#### Reactivity
No data available

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

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

#### Conditions to avoid

#### Incompatible materials
Strong oxidizing agents, caustic, Water, alcohols, amines, strong bases, metal components, surface active materials

#### Hazardous decomposition products
11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

**Inhalation**
Contains isocyanate monomer. If subject to spray application, engineering and administrative controls must be instituted to maintain an exposure level below .005ppm. If these controls are not adequate, the use of an air-supplied respirator is mandatory. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. May cause sensitization of susceptible persons.

**Eye contact**
Causes serious eye irritation.

**Skin contact**
May cause sensitization of susceptible persons. Irritating to skin.

**Ingestion**
Harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) REACTIVE MONOMER</td>
<td>= 31600 mg/kg (Rat) = 9200 mg/kg (Rat)</td>
<td>-</td>
<td>= 369 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER 26447-40-5</td>
<td>&gt; 10000 mg/kg (Rat)</td>
<td>&gt; 10000 mg/kg (Rabbit)</td>
<td>= 490 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>TRIETHYL PHOSPHATE 78-40-0</td>
<td>1100 - 1600 mg/kg (Rat) = 1165 mg/kg (Rat)</td>
<td>&gt; 20 g/kg (Rabbit)</td>
<td>&gt; 8187 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

**Symptoms**
Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Skin disorders. Respiratory disorders. Irritating to eyes and skin.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

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

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

**Mutagenicity**
May cause genetic defects.

**Carcinogenicity**
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) REACTIVE MONOMER</td>
<td>Group 3</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER 26447-40-5</td>
<td>Group 3</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reproductive effects**
No information available.

**STOT - single exposure**
Respiratory system, Skin

**STOT - repeated exposure**
Causes damage to organs through prolonged or repeated exposure

**Target organ effects**
Central nervous system, Eyes, respiratory system, Skin, blood.

**Aspiration hazard**
Not applicable.

**Acute Toxicity**
30 % 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**
100 % 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>
</table>
DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER
26447-40-5

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>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER 26447-40-5</td>
<td>4.5</td>
</tr>
<tr>
<td>TRIETHYL PHOSPHATE 78-40-0</td>
<td>0.8 - 1.11</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.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name
NOT REGULATED

Proper Shipping Name
NOT REGULATED

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

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complies</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
<td>Does Not Comply</td>
</tr>
</tbody>
</table>

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

**Chemical name**

DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER

**HAPS Data**

**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>DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER - 101-68-8</td>
<td>1.0</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER - 26447-40-5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous**

**Categorization**

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

<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>DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER - 101-68-8</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
<td></td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER - 26447-40-5</td>
<td></td>
<td>RQ 2270 kg final RQ</td>
<td></td>
</tr>
</tbody>
</table>

**California Prop. 65**

**WARNING:** None of the ingredients are listed with California Proposition 65.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER - 101-68-8</td>
<td>IARC Group 3</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER - 26447-40-5</td>
<td></td>
</tr>
</tbody>
</table>

**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>DIPHENYL METHANE DIISOCYANATE (MDI) REACTIVE MONOMER - 101-68-8</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER - 26447-40-5</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**16. OTHER INFORMATION**

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>2</th>
<th>Flammability</th>
<th>0</th>
<th>Instability</th>
<th>0</th>
<th>Physical hazard</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS (Hazardous Material Information System)</td>
<td>Health</td>
<td>2</td>
<td>Flammability</td>
<td>0</td>
<td>Reactivity</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Prepared By: Tnemec Regulatory Dept: 816-474-3400
Revision Date: 31-Jul-2018
Revision Summary:
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