1. IDENTIFICATION

Product identifier
Product Code S244-0244A
Product Name ULTRA-TREAD S244/S246 CLEAR

Other means of identification
Common Name SERIES 244/246, PART A

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

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 Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin sensitization Category 1</td>
</tr>
<tr>
<td>Germ cell mutagenicity Category 1B</td>
</tr>
<tr>
<td>Carcinogenicity Category 1B</td>
</tr>
<tr>
<td>Reproductive Toxicity Category 1B</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
May cause an allergic skin reaction
May cause genetic defects
May cause cancer
May damage fertility or the unborn child
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
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Response
IF exposed or concerned: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Storage
Store locked up
Keep away from children

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

Hazards not otherwise classified (HNOC)
Other information
Causes mild skin irritation
Very toxic to aquatic life with long lasting effects
SEE SAFETY DATA SHEET
Acute Toxicity 55.7018 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>10 - 30%</td>
</tr>
<tr>
<td>BUTYL BENZYL PHTHALATE</td>
<td>85-68-7</td>
<td>10 - 30%</td>
</tr>
<tr>
<td>ALKYL GLYCIDYL ETHER</td>
<td>68609-97-2</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>DISTILLATES, PETROLEUM, HYDROREATED MIDDLE</td>
<td>64742-46-7</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>TRIETHANOLAMINE</td>
<td>102-71-6</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>1-DODECENE</td>
<td>112-41-4</td>
<td>0.1 - 1%</td>
</tr>
<tr>
<td>PETROLEUM SOLVENT (NAPTHA)</td>
<td>64742-95-6</td>
<td>0.1 - 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
Show this safety data sheet to the doctor in attendance.
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 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


Unsuitable extinguishing media  No information available.

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.


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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHANOLAMINE</td>
<td>TWA: 5 mg/m³</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>102-71-6</td>
<td></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
Safety glasses with side-shields

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
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>opaque</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>
<tr>
<td>pH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>100 °C / 212.0 °F</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>60 °C / 140 °F</td>
<td>Pensky Martens - Closed Cup</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

Page 4 / 9
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, Strong bases, Strong acids

Hazardous decomposition products

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   Irritating to eyes.

   Skin contact  Irritating to skin.

   Ingestion    Harmful if swallowed.

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER 7732-18-5</td>
<td>&gt; 90 mL/kg (Rat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>= 2330 mg/kg (Rat)</td>
<td>= 6700 mg/kg (Rat)</td>
<td>&gt; 6.7 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>
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**
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>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIETHANOLAMINE 102-71-6</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reproductive effects**
May damage fertility or the unborn child.

**Developmental effects**
Developmental effects.

**STOT - single exposure**
No information available

**STOT - repeated exposure**
No information available

**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**
55.7018 % of the mixture consists of ingredient(s) of unknown toxicity.

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity**
Very toxic to aquatic life with long lasting effects

58.2874 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>0.02 - 0.25: 96 h Pseudokirchneriella subcapitata mg/L EC50 0.2 - 28.2: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>0.82: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 1.0 - 10.0: 96 h Lepomis macrochirus mg/L LC50 static 1.39 - 3.88: 96 h Pimephales promelas mg/L LC50 flow-through 1.0 - 10.0: 96 h Oncorhynchus mykiss mg/L LC50 static 0.78: 96 h Pimephales promelas mg/L LC50 static</td>
<td>0.97: 48 h Daphnia magna mg/L EC50 1.28: 48 h Daphnia magna mg/L EC50 semi-static 0.9 - 1.1: 48 h Daphnia magna mg/L EC50 Static 0.76: 48 h Daphnia magna mg/L EC50 Flow through</td>
</tr>
<tr>
<td>DISTILLATES, PETROLEUM, HYDROREATED MIDDLE 64742-46-7</td>
<td>10000: 96 h Pimephales promelas mg/L LC50 static 35: 96 h Pimephales promelas mg/L LC50 flow-through</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>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>3.57 - 4.91</td>
</tr>
<tr>
<td>TRIETHANOLAMINE 102-71-6</td>
<td>-2.53</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.

<table>
<thead>
<tr>
<th>Component</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td></td>
<td>Included in waste stream:</td>
<td>F039</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name: paint, water base freezeable
Not regulated

IATA
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
United States of America

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CERCLA

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>100 lb</td>
<td></td>
<td>RQ 100 lb final RQ RQ 45.4 kg final RQ</td>
</tr>
</tbody>
</table>

United States of America

California Prop. 65
WARNING! This product contains a chemical known in the State of California to cause cancer

<table>
<thead>
<tr>
<th>Component</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>Developmental</td>
</tr>
</tbody>
</table>

California SCAQMD Rule 443
Contains Photochemically Reactive Solvent

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER 7732-18-5</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>BUTYL BENZYL PHTHALATE 85-68-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
TRIETHANOLAMINE
102-71-6

16. OTHER INFORMATION

NFPA
Health 2
Flammability 1
Instability 1
Physical hazard *

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

Prepared By
Tnemec Regulatory Dept: 816-474-3400
Revision Date
12-Feb-2015
Revision Summary
9 4 5 7 10 11 14 15

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 MSDS
1. IDENTIFICATION

Product identifier
Product Code: S244-0244B
Product Name: ULTRA-TREAD S244/S246 CONVERTER

Other means of identification
Common Name: SERIES 244/246 PART B

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

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 Type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 4</td>
</tr>
<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

<table>
<thead>
<tr>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>May cause allergy or asthma symptoms or breathing difficulties if inhaled</td>
</tr>
<tr>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>Suspected of causing cancer</td>
</tr>
<tr>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>May cause damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>
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 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
Acute Toxicity 0 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER</td>
<td>9016-87-9</td>
<td>30 - 60%</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (VOLATILE MONOMER)</td>
<td>101-68-8</td>
<td>30 - 60%</td>
</tr>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER</td>
<td>5873-54-1</td>
<td>10 - 30%</td>
</tr>
<tr>
<td>2,2'-DIPHENYL METHANE DIISOCYANATE</td>
<td>2536-05-2</td>
<td>1 - 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
Show this safety data sheet to the doctor in attendance.

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 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
Avoid breathing vapors or mists.

Notes to physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide (CO2). Dry chemical. Dry powder.

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.

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. 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.

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>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) 101-68-8</td>
<td>TWA: 0.005 ppm</td>
<td>Ceiling: 0.02 ppm</td>
<td>Ceiling: 0.2 mg/m³</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

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

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

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
Physical state: liquid
Appearance: clear
Color: No information available
Odor: Slight
Odor threshold: No information available

<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>No data available</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>72 °C / 162 °F</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td></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 information available</td>
<td></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></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>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.23853</td>
<td>g/cm3</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in cold water</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>No data available</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>145 mPa s</td>
<td></td>
</tr>
</tbody>
</table>

Other Information

Density: 10.3293 lbs/gal
Volatile organic compounds (VOC) content: 4.33831 lbs/gal
Total volatiles weight percent: 42 %
Total volatiles volume percent: 36.15 %

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
Water, Amines, Strong bases, Alcohols, copper

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. May cause sensitization of susceptible persons.

Eye contact
Severely irritating to eyes.

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

Ingestion
Harmful if swallowed.

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER 9016-87-9</td>
<td>= 49 g/kg (Rat)</td>
<td>&gt; 9400 mg/kg (Rabbit)</td>
<td>= 490 mg/m$^3$ (Rat) 4 h</td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) 101-68-8</td>
<td>= 31600 mg/kg (Rat) = 9200 mg/kg (Rat)</td>
<td></td>
<td>= 369 mg/m$^3$ (Rat) 4 h</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms
Respiratory disorders. Skin disorders.

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
No information available.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER 9016-87-9</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) 101-68-8</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive effects
No information available.

STOT - single exposure
Eyes, Skin, Respiratory system

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

Target organ effects
Eyes, respiratory system.

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
0 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity
48 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media
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

IATA
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>Inventory</th>
<th>Status</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>Complies</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>

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

Component DIPHENYL METHANE DIISOCYANATE (VOLATILE MONOMER) HAPS Data

United States of America

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>Component</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYL METHANE DIISOCYANATE (MDI) POLYMER</td>
<td>9016-87-9</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
</tr>
</tbody>
</table>
DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) - 101-68-8 1.0
DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER - 5873-54-1 1.0
2,2’-DIPHENYL METHANE DIISOCYANATE - 2536-05-2 1.0

SARA 311/312 Hazardous
Categorization

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

CERCLA

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) - 101-68-8</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

United States of America

California Prop. 65
WARNING! This product contains a chemical known in the State of California to cause cancer

California SCAQMD Rule 443
Contains Photochemically Reactive Solvent

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER - 9016-87-9</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (VOLATILE MONOMER) - 101-68-8</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>DIPHENYLMETHANE DIISOCYANATE (MDI) POLYMER - 5873-54-1</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,2’-DIPHENYL METHANE DIISOCYANATE - 2536-05-2</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS (Hazardous Material Information System)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 3*</td>
</tr>
</tbody>
</table>

Prepared By: Tnemec Regulatory Dept: 816-474-3400
Revision Date: 12-Feb-2015
Revision Summary: 9 4 5 6 7 10 8 11 14
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 MSDS
1. IDENTIFICATION

Product identifier
Product Code S246-0246C
Product Name ULTRA-TREAD GLAZE AGGREGATE

Other means of identification
Common Name SERIES 246 PART C

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
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>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>1A</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>1</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements
Causes skin irritation
Causes serious eye damage
May cause an allergic skin reaction
May cause cancer
May cause respiratory irritation
Causes 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
- Wash face, hands and any exposed skin thoroughly after handling
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product

**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
- Immediately call a POISON CENTER or doctor/physician
- 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

**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**
- May be harmful if swallowed
- Harmful to aquatic life with long lasting effects
- Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure). Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs
- Exposure of sufficient duration to wet cement, or to dry cement on moist areas of the body, can cause serious, potentially irreversible tissue (skin, eye, respiratory tract) damage due to chemical (caustic) burns, including third degree burns
- SEE SAFETY DATA SHEET

Acute Toxicity
46.7618 % of the mixture consists of ingredient(s) of unknown toxicity.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SILICATES AND ALUMINATES</td>
<td>65997-15-1</td>
<td>60 - 100%</td>
</tr>
<tr>
<td>IRON OXIDE FUME</td>
<td>1309-37-1</td>
<td>10 - 30%</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>1305-62-0</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>GYPSUM</td>
<td>13397-24-5</td>
<td>1 - 10%</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

Description of first aid measures

General advice
Show this safety data sheet to the doctor in attendance.

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 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 (CO2). Dry powder. Dry chemical. Foam.

Unsuitable extinguishing media
No information available.

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
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.

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 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  
Shovel or sweep up.

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. Tightly fitting safety goggles. Wear protective gloves/clothing. 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>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>
| CALCIUM SILICATES AND ALUMINATES 65997-15-1 | TWA: 1 mg/m³ | TWA: 10 mg/m³  
TWA: 5 mg/m³  
TWA: 15 mg/m³ | 5000 mg/m³ |
| IRON OXIDE FUME 1309-37-1 | TWA: 5 mg/m³ | TWA: 10 mg/m³  
TWA: 5 mg/m³  
TWA: 15 mg/m³ | 2500 mg/m³ |
| CALCIUM HYDROXIDE 1305-62-0 | TWA: 5 mg/m³ | TWA: 10 mg/m³  
TWA: 5 mg/m³  
TWA: 15 mg/m³ | | |
| GYPSUM 13397-24-5 | TWA: 10 mg/m³ | TWA: 15 mg/m³  
TWA: 5 mg/m³ | | |
| MAGNESIUM OXIDE 1309-48-4 | TWA: 10 mg/m³ | TWA: 10 mg/m³  
TWA: 15 mg/m³ | 750 mg/m³ |
| LIMESTONE 1317-65-3 | - | TWA: 15 mg/m³  
TWA: 5 mg/m³ | | |
| CRYSTALLINE SILICA (QUARTZ) 14808-60-7 | TWA: 0.025 mg/m³ | TWA: 0.1 mg/m³  
TWA: 50 mg/m³ | | |
| CALCIUM OXIDE 1305-78-8 | TWA: 2 mg/m³ | TWA: 5 mg/m³  
TWA: 25 mg/m³ | | |

NIOSH IDLH: Immediately Dangerous to Life or Health

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**
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**
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>powder</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>off-white</td>
<td></td>
</tr>
<tr>
<td>Color</td>
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<td>No information available</td>
</tr>
<tr>
<td>Odor</td>
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<td>No information available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>No data available</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>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
<td>No data available</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>No data available</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>No data available</td>
<td>No data available</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>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>3.04895</td>
<td>g/cm³</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble in cold water</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
<td>No data available</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>No data available</td>
</tr>
</tbody>
</table>

**Other Information**

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>25.37183 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>
</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
Acids, Ammonia, Aluminum, Oxides of phosphorous

Hazardous decomposition products

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye contact</td>
<td>Severely irritating to eyes. May cause irreversible damage to eyes.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Contact causes severe skin irritation and possible burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Harmful if swallowed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRON OXIDE FUME</td>
<td>&gt; 10000 mg/kg ( Rat )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1309-37-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td></td>
<td>7340 mg/kg ( Rat )</td>
<td></td>
</tr>
<tr>
<td>1305-62-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)</td>
<td></td>
<td>500 mg/kg ( Rat )</td>
<td></td>
</tr>
<tr>
<td>14808-60-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALCIUM OXIDE</td>
<td></td>
<td>500 mg/kg ( Rat )</td>
<td></td>
</tr>
<tr>
<td>1305-78-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).

Mutagenicity
No information available.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>IRON OXIDE FUME</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1309-37-1</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ)</td>
<td>A2</td>
<td>Group 1</td>
<td>Known</td>
<td>X</td>
</tr>
<tr>
<td>14808-60-7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reproductive effects
No information available.

STOT - single exposure
Skin, Eyes, Lungs
12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects

77.9221 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td></td>
<td>160: 96 h Gambusia affinis mg/L</td>
<td>LC50 static</td>
</tr>
<tr>
<td>1305-62-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CALCIUM OXIDE</td>
<td></td>
<td>1070: 96 h Cyprinus carpio mg/L</td>
<td>LC50 static</td>
</tr>
<tr>
<td>1305-78-8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Mobility in Environmental Media

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.

California Hazardous Waste Status
This product contains one or more substances that are listed with the State of California as a hazardous waste

<table>
<thead>
<tr>
<th>Component</th>
<th>CAWAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SILICATES AND ALUMINATES</td>
<td>Special</td>
</tr>
<tr>
<td>65997-15-1</td>
<td></td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>Corrosive</td>
</tr>
<tr>
<td>1305-62-0</td>
<td></td>
</tr>
<tr>
<td>CALCIUM OXIDE</td>
<td>Corrosive</td>
</tr>
<tr>
<td>1305-78-8</td>
<td></td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name
SILICA, N.O.I.-20-P.C.F., GREATER (ITEM 176370, SUB 3)

IATA
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>Inventory</th>
<th>Complies/Does not comply</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>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</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
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

United States of America

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any 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>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

CERCLA

United States of America

California Prop. 65
WARNING! This product contains a chemical known in the State of California to cause cancer

<table>
<thead>
<tr>
<th>Component</th>
<th>California Prop. 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRYSTALLINE SILICA (QUARTZ) - 14808-60-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

California SCAQMD Rule 443
Does Not Contain Photochemically Reactive Solvent

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALCIUM SILICATES AND ALUMINATES</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>65997-15-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>NFPA Health</td>
<td>NFPA Flammability</td>
<td>NFPA Reactivity</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------------</td>
<td>------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Iron Oxide Fume</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Hydroxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium Oxide</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limestone</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crystalline Silica (Quartz)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Oxide</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Prepared By: Tnemec Regulatory Dept: 816-474-3400
Revision Date: 16-Feb-2015
Revision Summary: 9 4 5 7 10 8 11 14 15

Disclaimer:
For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.
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End of MSDS