



Material Safety Data Sheet

Print Date 10-May-2011

Revision Date 10-May-2011

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------------|---|
| Common name | SERIES 297 PART A |
| Product code | S297-11WHA |
| Trade name | ENVIRO-GLAZE WHITE |
| Product Class | ACRYLIC POLYOL PAINT |
| Manufacturer | Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 |
| Emergency telephone | 800-535-5053 (INFOTRAC) - TNE MEC REGULATORY DEPT: 816-474-3400 |

2. HAZARDS IDENTIFICATION

Emergency Overview

WARNING!

COMBUSTIBLE LIQUID AND VAPOR.
HARMFUL OR FATAL IF SWALLOWED.
HARMFUL IF INHALED.
MAY AFFECT THE BRAIN OR NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA.
MAY CAUSE EYE, SKIN, NOSE, THROAT AND RESPIRATORY TRACT IRRITATION.
MAY BE HARMFUL IF ABSORBED THROUGH SKIN.

Potential health effects

Principle Routes of Exposure Eye contact, Inhalation, Skin contact.

Acute effects

| | |
|-------------------|------------------------------------|
| Eyes | Moderately irritating to the eyes. |
| Skin | Irritating to skin. |
| Inhalation | Irritating to respiratory system. |
| Ingestion | May be harmful if swallowed. |

Chronic effects

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. Contains ethylene glycol monobutyl ether which may cause blood damage based on animal data.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system. Kidney disorders. Liver disorders. Skin disorders. Respiratory disorders.

Interactive effects Use of alcoholic beverages may enhance toxic effects.

Potential environmental effects See Section 12 for additional Ecological Information

Target Organ Effects Blood, Central nervous system, Eyes, Hematopoietic System, Kidney, Liver, Lungs, Respiratory system, Skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

| Component | CAS-No | Weight % |
|--|------------|----------|
| TITANIUM DIOXIDE (TOTAL DUST) | 13463-67-7 | 10 - 30 |
| POLYETHYLENE WAX-SYNTHETIC WAX | 9002-88-4 | 5 - 10 |
| AMORPHOUS SILICA | 7631-86-9 | 1 - 5 |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | 111-76-2 | 1 - 5 |
| ALUMINUM OXIDES | 1344-28-1 | 1 - 5 |
| AROMATIC PETROLEUM DISTILLATE | 64742-95-6 | 1 - 5 |
| 1,2,4-TRIMETHYLBENZENE | 95-63-6 | 0.1 - 1 |
| XYLENE | 1330-20-7 | 0.1 - 1 |

4. FIRST AID MEASURES

| | |
|----------------------|--|
| Eye contact: | Rinse thoroughly with plenty of water for at least 15 minutes. |
| Skin contact: | Wash off immediately with soap and plenty of water. |
| Ingestion: | If swallowed, do not induce vomiting. Get medical attention immediately. |
| Inhalation: | Move to fresh air. Oxygen or artificial respiration if needed. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Flammable properties | Combustible material. |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Contact with water may cause violent frothing. Use: Carbon dioxide (CO ₂) - Foam - Dry chemical |
| Hazardous decomposition products | Oxides of carbon, hydrocarbons. |
| 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. Solvent vapors are heavier than air and may spread along floors. Flash back possible over considerable distance. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal precautions | Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. |
| 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. |
| Other information | Not applicable |

7. HANDLING AND STORAGE

Handling

Avoid contact with skin, eyes 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.

Storage

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| Component | ACGIH TLV | OSHA PEL | Quebec TWAEV | Ontario TWAEV | Mexico OEL (TWA) |
|--|------------------------------|---|---|--|---|
| TITANIUM DIOXIDE (TOTAL DUST) | : 10 mg/m ³ TWA | : 10 mg/m ³ TWA (total dust) : 15 mg/m ³ TWA (total dust) | TWA: 10 mg/m ³ TWAEV (total dust, containing no asbestos and less than 1% crystalline silica) | TWA: 10 mg/m ³ TWA (total dust) | : 10 mg/m ³ TWA (as Ti) : 20 mg/m ³ STEL (as Ti) |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | : 20 ppm TWA | : 25 ppm TWA; 120 mg/m ³ TWA Skin : 50 ppm TWA; 240 mg/m ³ TWA | TWA: 20 ppm TWAEV; 97 mg/m ³ TWAEV | TWA: 20 ppm TWA | : 26 ppm TWA; 120 mg/m ³ TWA : 75 ppm STEL; 360 mg/m ³ STEL |
| ALUMINUM OXIDES | TWA: 1 mg/m ³ | : 10 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction) : 15 mg/m ³ TWA (total dust); 5 mg/m ³ TWA (respirable fraction) | TWA: 10 mg/m ³ TWAEV (total dust, containing no asbestos and less than 1% crystalline silica, as Al) | TWA: 10 mg/m ³ | : 10 mg/m ³ TWA |
| 1,2,4-TRIMETHYLBENZENE | TWA: 25 ppm | | TWA: 25 ppm TWA: 123 mg/m ³ | TWA: 25 ppm TWA: 123 mg/m ³ | TWA: 125 mg/m ³ TWA: 25 ppm STEL: 170 mg/m ³ STEL: 35 ppm |
| XYLENE | : 100 ppm TWA : 150 ppm STEL | : 100 ppm TWA; 435 mg/m ³ TWA : 150 ppm STEL; 655 mg/m ³ STEL | TWA: 100 ppm TWAEV; 434 mg/m ³ TWAEV STEL: 150 ppm STEV; 651 mg/m ³ STEV | TWA: 100 ppm TWA STEL: 150 ppm STEL | : 100 ppm TWA; 435 mg/m ³ TWA : 150 ppm STEL; 655 mg/m ³ STEL |

Engineering measures

Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Skin protection

Wear protective gloves/clothing.

Eye/face protection

Tightly fitting safety goggles

Respiratory protection

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

Flash point

52°C / 125.0°F

Boiling range

100 - 172°C / 212.0 - 341.0°F

Upper explosion limit

No information available

Lower explosion limit

No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---------------------------|
| Evaporation rate | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Specific Gravity | 1.35789 g/cm ³ |
| Density | 11.29970 lbs/gal |
| Volatile organic compounds (VOC) content | 1.182 lbs/gal |
| Volatile by weight | 39.7900 % |
| Volatile by volume | 54.9198 % |

10. STABILITY AND REACTIVITY

| | | | |
|------------------------------|---------------------------------|---|------------------------------|
| Chemical stability | Stable. | Conditions to avoid | Heat, flames and sparks. |
| Incompatible products | Strong oxidizing agents. Acids. | Possibility of hazardous reactions | None under normal processing |

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|---------------------|---|---|
| WATER | 90 mL/kg (Rat) | | |
| TITANIUM DIOXIDE (TOTAL DUST) | 10000 mg/kg (Rat) | | |
| AMORPHOUS SILICA | 5000 mg/kg (Rat) | 2000 mg/kg (Rabbit) | 2.2 mg/L (Rat) 1 h |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | 470 mg/kg (Rat) | 2270 mg/kg (Rat) 220 mg/kg (Rabbit) | 2.21 mg/L (Rat) 4 h 450 ppm (Rat) 4 h |
| ALUMINUM OXIDES | 5000 mg/kg (Rat) | | |
| AROMATIC PETROLEUM DISTILLATE | 8400 mg/kg (Rat) | 2000 mg/kg (Rabbit) | 3400 ppm (Rat) 4 h 5.2 mg/L (Rat) 4 h |
| 1,2,4-TRIMETHYLBENZENE | 3400 mg/kg (Rat) | 3160 mg/kg (Rabbit) | 18 g/m ³ (Rat) 4 h |
| XYLENE | 4300 mg/kg (Rat) | 1700 mg/kg (Rabbit) | 5000 ppm (Rat) 4 h 47635 mg/L (Rat) 4 h |

| | |
|----------------------|--------------------------|
| Irritation | No information available |
| Corrosivity | No information available |
| Sensitization | No information available |

Chronic toxicity

Carcinogenicity

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

| Component | ACGIH | IARC | NTP | OSHA | Mexico |
|--|-------|----------|-----|------|--------|
| TITANIUM DIOXIDE (TOTAL DUST) | | Group 2B | | X | |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | A3 | | | | |

| | |
|--|--|
| Mutagenicity | No information available |
| Reproductive effects | No information available |
| Developmental effects | No information available |
| Teratogenicity | No information available |
| Target Organ Effects | Blood, Central nervous system, Eyes, Hematopoietic System, Kidney, Liver, Lungs, Respiratory system, Skin. |
| Endocrine Disruptor Information | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Component | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia |
|--|----------------------|---|----------------------------|---|
| AMORPHOUS SILICA | EC50 = 440 mg/L 72 h | LC50= 5000 mg/L Brachydanio rerio 96 h | | EC50 = 7600 mg/L 48 h |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | | LC50= 1490 mg/L Lepomis macrochirus 96 h LC50= 2950 mg/L Lepomis macrochirus 96 h | | EC50 1698 - 1940 mg/L 24 h EC50 > 1000 mg/L 48 h |
| AROMATIC PETROLEUM DISTILLATE | | LC50= 9.22 mg/L Oncorhynchus mykiss 96 h | | EC50 = 6.14 mg/L 48 h |
| 1,2,4-TRIMETHYLBENZENE | | LC50 7.19-8.28 mg/L Pimephales promelas 96 h LC50= 7.72 mg/L Pimephales promelas 96 h | | EC50 = 6.14 mg/L 48 h |
| XYLENE | | LC50= 13.4 mg/L Pimephales promelas 96 h LC50 2.661-4.093 mg/L Oncorhynchus mykiss 96 h LC50 13.5-17.3 mg/L Oncorhynchus mykiss 96 h LC50 13.1-16.5 mg/L Lepomis macrochirus 96 h LC50= 19 mg/L Lepomis macrochirus 96 h LC50 7.711-9.591 mg/L Lepomis macrochirus 96 h LC50 23.53-29.97 mg/L Pimephales promelas 96 h LC50= 780 mg/L Cyprinus carpio 96 h LC50> 780 mg/L Cyprinus carpio 96 h LC50 30.26-40.75 mg/L Poecilia reticulata 96 h | EC50 = 0.0084 mg/L 24 h | EC50 = 3.82 mg/L 48 h LC50 = 0.6 mg/L 48 h |

13. DISPOSAL CONSIDERATIONS

Waste 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 for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

Ground Transportation Only. Call TNEMEC Traffic Department - 816-474-3400 for other modes of Transportation.

Proper shipping name

PAINT, WATER BASE FREEZABLE

15. REGULATORY INFORMATION

International Inventories

TSCA
DSL/NDL

Complies
Complies

| | |
|---------------|-----------------|
| EINECS/ELINCS | Does not Comply |
| CHINA | Does not Comply |
| ENCS | Does not Comply |
| KECL | Does not Comply |
| PICCS | Does not Comply |
| AICS | Does not Comply |

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

Component

ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN)
XYLENE

United States of America Federal Regulations

SARA 313

| Component | CAS-No | Weight % | SARA 313 - Threshold Values |
|--|-----------|----------|--|
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | 111-76-2 | 1 - 5 | 1.0 |
| ALUMINUM OXIDES | 1344-28-1 | 1 - 5 | 1.0 % de minimis concentration (fibrous forms) |
| 1,2,4-TRIMETHYLBENZENE | 95-63-6 | 0.1 - 1 | 1.0 % de minimis concentration |
| XYLENE | 1330-20-7 | 0.1 - 1 | 1.0 % de minimis concentration |

SARA 311/312 Hazardous Categorization

| | |
|-----------------------------------|-----|
| Chronic Health Hazard | yes |
| Acute Health Hazard | yes |
| Fire Hazard | yes |
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

| Component | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|-----------|-----------------------------|------------------------|---------------------------|----------------------------|
| XYLENE | 100 lb RQ | | | X |

CERCLA

United States of America State Regulations

California Prop. 65

This product contains the following Proposition 65 chemicals:

State Right-to-Know

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| TITANIUM DIOXIDE (TOTAL DUST) | X | X | X | | X |
| AMORPHOUS SILICA | X | | X | | |
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | X | X | X | X | X |
| ALUMINUM OXIDES | X | X | X | | X |
| 1,2,4-TRIMETHYLBENZENE | X | X | X | X | X |
| XYLENE | X | X | X | X | X |

Other international regulations

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

WHMIS Classification

B3 Combustible liquid

D2B Toxic materials



| Component | NPRI |
|--|---|
| ETHYLENE GLYCOL MONOBUTYL ETHER (SKIN) | Part 1, Group 1 Substance; Part 5 Substance |
| ALUMINUM OXIDES | Part 1, Group 1 Substance (fibrous form) |
| AROMATIC PETROLEUM DISTILLATE | Part 5 Substance |
| 1,2,4-TRIMETHYLBENZENE | Part 1, Group 1 Substance; Part 5 Substance |
| XYLENE | Part 1, Group 1 Substance; Part 5 Substance |

Legend

NPRI - National Pollutant Release Inventory

| |
|-----------------------|
| 16. OTHER INFORMATION |
|-----------------------|

Revision Date 10-May-2011

Revision Note No information available

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

Disclaimer

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

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy or 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



Material Safety Data Sheet

Print Date 16-May-2011

Revision Date 16-May-2011

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------------|---|
| Common name | SERIES 297 PART B |
| Product code | S297-0297B |
| Trade name | ENVIRO-GLAZE CONVERTER |
| Product Class | ISOCYANATE |
| Manufacturer | Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO 64120-1372 |
| Emergency telephone | 800-535-5053 (INFOTRAC) - TNE MEC REGULATORY DEPT: 816-474-3400 |

2. HAZARDS IDENTIFICATION

Emergency Overview

DANGER!

HARMFUL OR FATAL IF SWALLOWED.
HARMFUL IF INHALED.
MAY CAUSE ALLERGIC RESPIRATORY REACTION; EFFECTS MAY BE PERMANENT.
MAY CAUSE ALLERGIC SKIN REACTION; EFFECTS MAY BE PERMANENT.
MAY CAUSE LUNG INJURY.
MAY CAUSE EYE, SKIN, NOSE, THROAT AND RESPIRATORY TRACT IRRITATION.

Potential health effects

Principle Routes of Exposure Eye contact, Inhalation, Skin contact.

Acute effects

| | |
|-------------------|--|
| Eyes | Moderately irritating to the eyes. Risk of serious damage to eyes. |
| Skin | Irritating to skin. May cause sensitization by skin contact. |
| Inhalation | Irritating to respiratory system. May cause allergic respiratory reaction. |
| Ingestion | May be harmful if swallowed. |

Chronic effects

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. Avoid repeated exposure.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions No information available

Interactive effects No information available

Potential environmental effects See Section 12 for additional Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|--|------------|----------|
| HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER | 28182-81-2 | 60 - 100 |
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | 822-06-0 | 0.1 - 1 |

4. FIRST AID MEASURES

| | |
|----------------------|--|
| Eye contact: | Rinse thoroughly with plenty of water for at least 15 minutes. |
| Skin contact: | Wash off immediately with soap and plenty of water. |
| Ingestion: | If swallowed, do not induce vomiting. Get medical attention immediately. |
| Inhalation: | Move to fresh air. Oxygen or artificial respiration if needed. |

5. FIRE-FIGHTING MEASURES

| | |
|--|---|
| Flammable properties | No information available. |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Contact with water may cause violent frothing. Use: Carbon dioxide (CO ₂) - Foam - Dry chemical |
| Hazardous decomposition products | Oxides of carbon, hydrocarbons. Oxides of nitrogen. Hydrogen cyanide. |
| 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 | Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. |
| Environmental precautions | Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. |
| 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. |
| Other information | Not applicable |

7. HANDLING AND STORAGE

Handling

Use only with adequate ventilation. Avoid contact with skin, eyes 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.

Storage

Close container after each use. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | Quebec TWAEV | Ontario TWAEV | Mexico OEL (TWA) |
|--|-----------------|----------|---|---|------------------|
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | : 0.005 ppm TWA | | TWA: 0.005 ppm TWAEV; 0.034 mg/m ³ TWAEV | TWA: 0.005 ppm TWA (designated substance regulation, listed under Isocyanates, organic compounds); 0.005 ppm TWA (applies to workplaces to which the designated substance regulation does not apply) CEV: 0.02 ppm Ceiling (designated substances regulation) | |

Engineering measures

Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Skin protection

Lightweight protective clothing, Apron, Impervious gloves

Eye/face protection

Safety glasses with side-shields

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

| | |
|--|---------------------------|
| Flash point | Not applicable |
| Boiling range | No information available |
| Upper explosion limit | No information available |
| Lower explosion limit | No information available |
| Evaporation rate | No information available |
| Vapor pressure | No information available |
| Vapor density | No information available |
| Specific Gravity | 1.16562 g/cm ³ |
| Density | 9.69970 lbs/gal |
| Volatile organic compounds (VOC) content | .000 lbs/gal |
| Volatile by weight | .0000 % |
| Volatile by volume | .0000 % |

10. STABILITY AND REACTIVITY

| | | | |
|------------------------------|--|---|-------------------------------------|
| Chemical stability | Stable. | Conditions to avoid | Heat, flames and sparks. Amines. |
| Incompatible products | Water, alcohols, amines, strong bases, metal components, surface active materials. | Possibility of hazardous reactions | None under normal processing |

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|-------------------|----------------------|---|
| HEXAMETHYLENE DIISOCYANATE (HDI) POLYMER | | | 18500 mg/m ³ (Rat) 1 h |
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | 710 mg/kg (Rat) | 570 mg/kg (Rabbit) | 0.15 mg/L (Rat) 4 h 0.29 mg/L (Rat) 1 h |

| | |
|----------------------|--------------------------|
| Irritation | No information available |
| Corrosivity | No information available |
| Sensitization | No information available |

Chronic toxicity

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

| | |
|--|--------------------------|
| Mutagenicity | No information available |
| Reproductive effects | No information available |
| Developmental effects | No information available |
| Teratogenicity | No information available |
| Target Organ Effects | No information available |
| Endocrine Disruptor Information | No information available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

| Component | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia |
|--|-------------------|--|--|---------------------|
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | | LC50= 26.1 mg/L Brachydanio rerio 96 h | EC50 = 53.2 mg/L 5 min EC50 = 25.5 mg/L 15 min EC50 = 15.7 mg/L 30 min | |

13. DISPOSAL CONSIDERATIONS

| | |
|-------------------------------|--|
| Waste 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 for local recycling, recovery or waste disposal |

| |
|---------------------------|
| 14. TRANSPORT INFORMATION |
|---------------------------|

DOT Ground Transportation Only. Call TNEMEC Traffic Department - 816-474-3400 for other modes of Transportation.

Proper shipping name PAINT IN OIL

| |
|----------------------------|
| 15. REGULATORY INFORMATION |
|----------------------------|

International Inventories

| | |
|----------------------|-----------------|
| TSCA | Complies |
| DSL/NDSL | Complies |
| EINECS/ELINCS | Complies |
| CHINA | Complies |
| ENCS | Does not Comply |
| KECL | Complies |
| PICCS | Complies |
| AICS | Complies |

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

Component
HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER

United States of America Federal Regulations**SARA 313**

| Component | CAS-No | Weight % | SARA 313 - Threshold Values |
|--|----------|----------|---|
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | 822-06-0 | 0.1 - 1 | 1.0 % de minimis concentration (listed under Chemical Category N120, Diisocyanates) |

SARA 311/312 Hazardous Categorization

| | |
|--|-----|
| Chronic Health Hazard | yes |
| Acute Health Hazard | yes |
| Fire Hazard | no |
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

CERCLA**United States of America State Regulations****California Prop. 65**

This product contains the following Proposition 65 chemicals:

State Right-to-Know

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| HEXAMETHYLENE DIISOCYANATE (HDI) MONOMER | X | X | | X | |

Other international regulations

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

WHMIS Classification

D2A Very toxic materials

**Legend**

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Revision Date 16-May-2011

Revision Note No information available

HMIS (Hazardous Material Information System) **Health** 3* **Flammability** 1 **Reactivity** 1

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