



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M™ Novec™ 73DE Engineered Fluid

Product Identification Numbers

80-0014-4503-2, 98-0212-4901-0, 98-0212-4902-8, 98-0212-4903-6, 98-0212-4909-3, 98-0212-4921-8
7100095234, 7100095233, 7100095235, 7010320319, 7100167057, 7100249390

1.2. Recommended use and restrictions on use

Recommended use

For Industrial Use Only. See Limitations on Use for supplemental information on intended applications including Medical Device applications.

Restrictions on use

Novec™ Engineered Fluids are used in a wide variety of applications including but not limited to precision cleaning of medical devices and as lubricant deposition solvents for medical devices. When the product is used for applications where the finished device is implanted into the human body, no residual Novec™ solvent may remain on the parts. It is highly recommended that the supporting test results and protocol be cited during FDA registration.

3M Electronics Materials Solutions Division (EMSD) will not knowingly sample, support, or sell its products for incorporation in medical and pharmaceutical products and applications in which the 3M product will be temporarily or permanently implanted into humans or animals. The customer is responsible for evaluating and determining that a 3M EMSD product is suitable and appropriate for its particular use and intended application. The conditions of evaluation, selection, and use of a 3M product can vary widely and affect the use and intended application of a 3M product. Because many of these conditions are uniquely within the user's knowledge and control, it is essential that the user evaluate and determine whether the 3M product is suitable and appropriate for a particular use and intended application, and complies with all local applicable laws, regulations, standards, and guidance.

1.3. Supplier's details

MANUFACTURER: 3M
DIVISION: Electronics Materials Solutions Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Specific Target Organ Toxicity (single exposure): Category 3.

2.2. Label elements**Signal word**

Warning

Symbols

Exclamation mark |

Pictograms**Hazard Statements**

Causes eye irritation.

May cause drowsiness or dizziness.

Precautionary Statements**Prevention:**

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Wash thoroughly after handling.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:

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

Store locked up.

Disposal:

Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified

In use, may form flammable/explosive vapour-air mixture.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|-------------|---------|
| 1,2-Trans-Dichloroethylene | 156-60-5 | 84 - 86 |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | 132182-92-4 | 14 - 16 |

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Wash with soap and water. If you feel unwell, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Material displays no closed-cup flash point but may form flammable/explosive vapor air mixture.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide
Carbon dioxide
Hydrogen Chloride
Hydrogen Fluoride

Condition

During Combustion
During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sparks, flames, and extreme heat. Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Eliminate all potential ignition sources when cleaning up spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Contents may be under pressure, open carefully. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products. Keep away from sparks, flames, and extreme heat.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Store at temperatures not exceeding 38C/100F. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|--|-------------|-------------------------|------------------------|---------------------|
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | 132182-92-4 | Manufacturer determined | TWA(8 hours):100 ppm | |
| 1,2-Trans-Dichloroethylene | 156-60-5 | ACGIH | TWA:200 ppm | |
| Ethene, 1,2-dichloro- | 156-60-5 | OSHA | TWA:790 mg/m3(200 ppm) | |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Provide ventilation adequate to maintain vapor concentration below lower explosive concentration. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect Vented Goggles

Skin/hand protection

Chemical protective gloves are not required under normal use conditions. However, when the product is subjected to extreme heat, HF may be formed. For those cases, neoprene gloves and apron are recommended.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapors

Organic vapor respirators may have short service life.

For questions about suitability for a specific application, consult with your respirator manufacturer.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state

Liquid

Color

Colorless

Specific Physical Form:

Liquid

Odor

Slight Odor

Odor threshold

No Data Available

pH

Not Applicable

Melting point

Not Applicable

Boiling Point

47.6 °C

Flash Point

No flash point [*Details:*Tested according to ASTM Method D-3278-96 e-1 (additionally, not flammable below 250 C per KS M ISO 2592)]

Evaporation rate

No Data Available

Flammability (solid, gas)

Not Applicable

Flammable Limits(LEL)

7.5 % volume [*Details:*Tested according to ASTM Method E681-15 (Per Annex A1, closed vessel test method for difficult-to-ignite materials)]

Flammable Limits(UEL)

15.0 % volume [*Details:*Tested according to ASTM Method E681-15 (Per Annex A1, closed vessel test method for difficult-to-ignite materials)]

Vapor Pressure

263 mmHg [*@ 68 °F*]

Vapor Density

5.2

Density

1.2808 g/ml

Specific Gravity

1.2808 [*Ref Std:*WATER=1]

Solubility In Water

< 10 ppm

Solubility- non-water

No Data Available

Partition coefficient: n-octanol/ water

No Data Available

Autoignition temperature

427 °C

Decomposition temperature

No Data Available

Viscosity

0.384 centipoise [*@ 25 °C*]

Molecular weight

Not Applicable

Volatile Organic Compounds

1281 g/l [*Details:*40 CFR 51.100(s)]

Percent volatile

100 %

VOC Less H2O & Exempt Solvents

1090 g/l [Details:40 CFR 51.100(s)]

SECTION 10: Stability and reactivity**10.1. Reactivity**

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames

10.5. Incompatible materials

Strong bases

Strong oxidizing agents

10.6. Hazardous decomposition products**Substance****Condition**

Carbon monoxide

At Elevated Temperatures - extreme conditions of heat

Carbon dioxide

At Elevated Temperatures - extreme conditions of heat

Hydrogen Chloride

At Elevated Temperatures - extreme conditions of heat

Hydrogen Fluoride

At Elevated Temperatures - extreme conditions of heat

Perfluoroisobutylene (PFIB)

At Elevated Temperatures - extreme conditions of heat

Toxic Vapor, Gas, Particulate

At Elevated Temperatures - extreme conditions of heat

Refer to section 5.2 for hazardous decomposition products during combustion.

If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

Additional Health Effects:**Single exposure may cause target organ effects:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

| Name | Route | Species | Value |
|--|----------------------------|---------|--|
| Overall product | Ingestion | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Inhalation-Vapor (4 hours) | Rat | LC50 > 22.1 mg/l |
| 1,2-Trans-Dichloroethylene | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| 1,2-Trans-Dichloroethylene | Inhalation-Vapor (4 hours) | Rat | LC50 95.6 mg/l |
| 1,2-Trans-Dichloroethylene | Ingestion | Rat | LD50 7,902 mg/kg |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Dermal | Rat | LD50 > 2,000 mg/kg |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Inhalation-Vapor (4 hours) | Rat | LC50 > 430 mg/l |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Ingestion | Rat | LD50 > 2,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|--|---------|---------------------------|
| 1,2-Trans-Dichloroethylene | Rabbit | Minimal irritation |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Rabbit | No significant irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|--|---------|---------------------------|
| 1,2-Trans-Dichloroethylene | Rabbit | Moderate irritant |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|--|---------|----------------|
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Mouse | Not classified |

Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity

| Name | Route | Value |
|--|----------|---------------|
| 1,2-Trans-Dichloroethylene | In Vitro | Not mutagenic |
| 1,2-Trans-Dichloroethylene | In vivo | Not mutagenic |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | In Vitro | Not mutagenic |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | In vivo | Not mutagenic |

Carcinogenicity

For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--|------------|--|---------|----------------|--------------------------|
| 1,2-Trans-Dichloroethylene | Inhalation | Not classified for development | Rat | NOAEL 24 mg/l | during organogenesis |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Inhalation | Not classified for female reproduction | Rat | NOAEL 281 mg/l | premating into lactation |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Inhalation | Not classified for male reproduction | Rat | NOAEL 281 mg/l | 28 days |
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | Inhalation | Not classified for development | Rat | NOAEL 281 mg/l | premating into lactation |

Target Organ(s)**Specific Target Organ Toxicity - single exposure**

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|-----------------------------------|--|---------|---------------------|-----------------------|
| 1,2-Trans-Dichloroethylene | Inhalation | central nervous system depression | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| 1,2-Trans-Dichloroethylene | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | | NOAEL Not available | |
| 1,2-Trans-Dichloroethylene | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | LOAEL 4,500 mg/kg | not applicable |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|----------------------------|------------|---|----------------|---------|-----------------------|-------------------|
| 1,2-Trans-Dichloroethylene | Inhalation | endocrine system liver kidney and/or bladder respiratory system | Not classified | Rat | NOAEL 16 mg/l | 90 days |
| 1,2-Trans-Dichloroethylene | Ingestion | kidney and/or bladder | Not classified | Rat | NOAEL 2,000 mg/kg/day | 14 weeks |
| 1,2-Trans-Dichloroethylene | Ingestion | blood liver | Not classified | Rat | NOAEL 125 mg/kg/day | 14 weeks |
| 1,2-Trans-Dichloroethylene | Ingestion | heart immune system respiratory system | Not classified | Rat | NOAEL 2,000 mg/kg/day | 14 weeks |

| | | | | | | |
|---|------------|--|--|-----|-----------------------------|---------|
| Pentane, 1,1,1,2,2,3,4,5,5,5- decafluoro-3-methoxy-4- (trifluoromethyl)- | Inhalation | endocrine system liver heart hematopoietic system immune system nervous system kidney and/or bladder | Not classified | Rat | NOAEL 281 mg/l | 28 days |
| Pentane, 1,1,1,2,2,3,4,5,5,5- decafluoro-3-methoxy-4- (trifluoromethyl)- | Inhalation | respiratory system | Not classified | Rat | NOAEL 143 mg/l | 5 days |
| Pentane, 1,1,1,2,2,3,4,5,5,5- decafluoro-3-methoxy-4- (trifluoromethyl)- | Ingestion | liver kidney and/or bladder | Some positive data exist, but the data are not sufficient for classification | Rat | NOAEL 150 mg/kg/day | 28 days |
| Pentane, 1,1,1,2,2,3,4,5,5,5- decafluoro-3-methoxy-4- (trifluoromethyl)- | Ingestion | endocrine system bone, teeth, nails, and/or hair hematopoietic system heart immune system nervous system | Not classified | Rat | NOAEL 1,000 mg/kg/day | 28 days |

Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information**Ecotoxicological information**

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

SECTION 13: Disposal considerations**13.1. Disposal methods**

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit <http://3M.com/Transportinfo> or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

| <u>Ingredient</u> | <u>C.A.S. No</u> | <u>% by Wt</u> |
|--|------------------|----------------|
| 1,2-Trans-Dichloroethylene (Ethene, 1,2-dichloro-) | 156-60-5 | 84 - 86 |

This material contains a chemical which requires export notification under TSCA Section 12[b]:

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Regulation</u> | <u>Status</u> |
|--|------------------|--|---------------|
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | 132182-92-4 | Toxic Substances Control Act (TSCA) 5 SNUR or Consent Order Chemicals | Applicable |
| 1,2-Trans-Dichloroethylene | 156-60-5 | Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals | Applicable |

This material contains a chemical regulated by an EPA Significant New Use Rule (TSCA Section 5)

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Reference</u> |
|--|------------------|------------------|
| Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro-3-methoxy-4-(trifluoromethyl)- | 132182-92-4 | 40CFR721.10061 |

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 3 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

The NFPA Health code of 3 is due to emergency situations where the material may thermally decompose and release Hydrogen Fluoride and Perfluoroisobutylene (PFIB). During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

HMIS Hazard Classification

Health: 2 **Flammability:** 1 **Physical Hazard:** 0 **Personal Protection:** X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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|------------------------|-----------|-------------------------|----------|
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