

Safety Data Sheet

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Document Group:	08-6448-8	Version Number:	7.03
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Product identifier

QS2010-3T-WS Series Transition Splice Kits (Resin 4N)

ID Number(s):

80-6109-8294-6, 80-6109-8295-3, 80-6109-8296-1, 80-6109-8745-7

7100164636, 7100164637, 7100164638, 7000148846

Recommended use Electrical, Medium Voltage power cable splice kits

Supplier's details

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

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

24-9848-3, 34-7684-3, 06-4861-8, 35-7972-9

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Document Group:	06-4861-8	Version Number:	12.03
Issue Date:	04/30/21	Supercedes Date:	12/01/20

SECTION 1: Identification

1.1. Product identifier 3MTM P55/R Lubricant, Red

Product Identification Numbers

ID Number UPC 78-8096-4318-8 80-6116-0479-6 ID Number 78-8126-9891-4 UPC

1100004531, 4000009451, 1100008374, 7100063622

1.2. Recommended use and restrictions on use

Recommended use Electrical, ELECTRICAL LUBRICATING GREASE

1.3. Supplier's details	
MANUFACTURER:	3M
DIVISION:	Electrical Markets 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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

2.2. Label elements Signal word Not applicable.

Symbols Not applicable.

Pictograms Not applicable.

Precautionary Statements

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
1,1,2,3,3,3-HEXAFLUORO-1-PROPENE, OXIDIZED,	69991-67-9	95 - 98
POLYMD.		
SYNTHETIC AMORPHOUS SILICA, FUMED,	112945-52-5	<= 5
CRYSTALLINE FREE		
C.I. PIGMENT RED 170	2786-76-7	<= 0.05

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you are concerned, get medical advice.

Skin Contact:

Wash with soap and water. If signs/symptoms develop, 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:

No need for first aid is anticipated.

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

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

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

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance	<u>Condition</u>
Carbonyl Fluoride	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus,

bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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.

6.3. Methods and material for containment and cleaning up

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

For industrial/occupational use only. Not for consumer sale or use. Avoid release to the environment. Keep away from reactive metals (eg. Aluminum, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from strong bases.

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
SILICA, AMORPHOUS	112945-52-	OSHA	TWA:20 millions of	
	5		particles/cu. ft.;TWA	
			concentration:0.8 mg/m3	

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

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

None required.

Skin/hand protection

No chemical protective gloves are required.

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 particulates

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	Red			
Specific Physical Form:	Paste			
Odor	Odorless			
Odor threshold	Not Applicable			
рН	Not Applicable			
Melting point	Not Applicable			
Boiling Point	270 °C [Details: MITS data (per supplier info)]			
Flash Point	Flash point > 93 °C (200 °F)			
Evaporation rate	No Data Available			
Flammability (solid, gas)	Not Applicable			
Flammable Limits(LEL)	Not Applicable			
Flammable Limits(UEL)	Not Applicable			
Vapor Pressure	<=0.01 mmHg			
Vapor Density	No Data Available			
Density	No Data Available			
Specific Gravity	Approximately 1.99 [<i>Ref Std</i> :WATER=1]			
Solubility in Water	Nil			
Solubility- non-water	Not Applicable			
Partition coefficient: n-octanol/ water	No Data Available			
Autoignition temperature	Not Applicable			
Decomposition temperature	Not Applicable			
Viscosity	No Data Available			
Average particle size	No Data Available			
Bulk density	No Data Available			
Hazardous Air Pollutants	No Data Available			
Molecular weight	No Data Available			
Volatile Organic Compounds	No Data Available			
Percent volatile	0.00 %			
Softening point	No Data Available			
VOC Less H2O & Exempt Solvents	No Data Available			

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 Not determined

10.5. Incompatible materials

Strong acids Strong bases Reactive metals

No Data Available

10.6. Hazardous decomposition products Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

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: No known health effects.

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

Eye Contact:

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

Ingestion:

No known health effects.

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
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Dermal	Rabbit	LD50 > 5,000 mg/kg
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Ingestion	Rat	LD50 > 5,110 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Human	Not classified
	and	
	animal	

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
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE	Not	Mouse	Some positive data exist, but the data are not
FREE	Specified		sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure
					Duration
SYNTHETIC AMORPHOUS SILICA,	Ingestion	Not classified for female reproduction	Rat	NOAEL 509	1 generation
FUMED, CRYSTALLINE FREE	-	-		mg/kg/day	•
SYNTHETIC AMORPHOUS SILICA,	Ingestion	Not classified for male reproduction	Rat	NOAEL 497	1 generation
FUMED, CRYSTALLINE FREE	-	-		mg/kg/day	-
SYNTHETIC AMORPHOUS SILICA,	Ingestion	Not classified for development	Rat	NOAEL 1,350	during
FUMED, CRYSTALLINE FREE	Ū.	*		mg/kg/day	organogenesi
					s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure

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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. 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 HF. Facility must be capable of handling halogenated materials. Empty and clean product containers may be disposed as non-hazardous waste. Consult your specific regulations and service providers to determine available options and requirements.

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	
Not applicable	

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

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. During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

HMIS Hazard Classification

Health: 0 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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Reason for Reissue

Conversion to GHS format SDS.

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determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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Document Group:	24-9848-3	Version Number:	3.02
Issue Date:	02/19/20	Supercedes Date:	11/08/19

SECTION 1: Identification

1.1. Product identifier

3MTM ScotchcastTM Electrical Insulating Resin 4N, Part A and 3MTM ScotchcastTM Electrical Insulating Resin 4, Part A

1.2. Recommended use and restrictions on use

Recommended use Electrical, Part A of Resin 4 & Resin 4N

1.3. Supplier's details	
MANUFACTURER:	3M
DIVISION:	Electrical Markets 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. Skin Sensitizer: Category 1A.

2.2. Label elements Signal word Warning

Symbols Exclamation mark |

Pictograms



Hazard Statements

Causes eye irritation. May cause an allergic skin reaction.

Precautionary Statements

Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

Disposal:

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

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether	25085-99-8	80 - 100 Trade Secret *
polymer		
OXIRANE, MONO[(C12-14-	68609-97-2	< 20 Trade Secret *
ALKYLOXY)METHYL]DERIVATIVES		

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, 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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

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

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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls

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

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended: Polymer laminate

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

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 and particulates

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	Amber
Specific Physical Form:	Resin
Odor	Epoxy
Odor threshold	No Data Available
рН	No Data Available
Melting point	No Data Available

Boiling Point $>= 201 \, {}^{\circ}\text{F}$ **Flash Point** >= 201 °F [*Test Method*:Closed Cup] No Data Available **Evaporation rate** Flammability (solid, gas) Not Applicable Flammable Limits(LEL) No Data Available Flammable Limits(UEL) No Data Available **Vapor Pressure** <= 27 psia [@ 131 °F] Vapor Density No Data Available Density 1.16 g/ml **Specific Gravity** 1.16 [*Ref Std*:WATER=1] Solubility in Water Negligible Solubility- non-water No Data Available Partition coefficient: n-octanol/ water No Data Available Autoignition temperature No Data Available **Decomposition temperature** No Data Available Viscosity 3,000 centipoise - 5,000 centipoise Average particle size No Data Available **Bulk density** No Data Available **Hazardous Air Pollutants** No Data Available Molecular weight No Data Available **Volatile Organic Compounds** No Data Available **Percent volatile** Negligible No Data Available Softening point **VOC Less H2O & Exempt Solvents** No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

<u>Substance</u>

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient

Condition

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.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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.

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
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Rat	LD50 > 1,600 mg/kg
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Rat	LD50 > 1,000 mg/kg
OXIRANE, MONO[(C12-14-	Dermal	Rabbit	LD50 > 4,000 mg/kg
ALKYLOXY)METHYL]DERIVATIVES			
OXIRANE, MONO[(C12-14-	Ingestion	Rat	LD50 17,100 mg/kg
ALKYLOXY)METHYL]DERIVATIVES			

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name		Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Mild irritant
OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL]DERIVATIVES	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Rabbit	Moderate irritant
OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL]DERIVATIVES	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human	Sensitizing
	and	
	animal	
OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL]DERIVATIVES	Guinea	Sensitizing

02/19/20

pig

Respiratory Sensitization

Name	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Human	Not classified

Germ Cell Mutagenicity

Name	Route	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In vivo	Not mutagenic
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	In Vitro	Some positive data exist, but the data are not sufficient for classification
OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL]DERIVATIVES	In vivo	Not mutagenic
OXIRANE, MONO[(C12-14-ALKYLOXY)METHYL]DERIVATIVES	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

Carcinogenicity

Name	Route	Species	Value
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesi s
2,2-Bis(p-hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
OXIRANE, MONO[(C12-14- ALKYLOXY)METHYL]DERIVATIVES	Dermal	Not classified for development	Rat	NOAEL 200 mg/kg/day	during organogenesi s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
OXIRANE, MONO[(C12- 14- ALKYLOXY)METHYL]D ERIVATIVES	Dermal	heart blood liver nervous system kidney and/or bladder	Not classified	Rabbit	NOAEL 4,000 mg/kg	24 hours

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
2,2-Bis(p- hydroxyphenyl)propane diglycidyl ether polymer	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
2,2-Bis(p- hydroxyphenyl)propane diglycidyl ether polymer	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
2,2-Bis(p- hydroxyphenyl)propane diglycidyl ether polymer	Ingestion	auditory system heart endocrine system hematopoietic	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days

		system liver eyes kidney and/or bladder				
OXIRANE, MONO[(C12- 14- ALKYLOXY)METHYL] DERIVATIVES	Dermal	nervous system respiratory system	Not classified	Rat	NOAEL 100 mg/kg/day	14 weeks
OXIRANE, MONO[(C12- 14- ALKYLOXY)METHYL] DERIVATIVES	Dermal	blood liver eyes kidney and/or bladder	Not classified	Rat	NOAEL 100 mg/kg/day	13 weeks

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.

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. As a disposal alternative, utilize an acceptable permitted waste disposal facility. 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

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the new substance notification requirements of CEPA.

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 Philippines RA 6969 requirements. 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: 2 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.

HMIS Hazard ClassificationHealth: 2Flammability: 1Physical Hazard: 0Personal 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).

Document Group:	24-9848-3	Version Number:	3.02
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Issue Date: 02/19/20 **Supercedes Date:** 11/08/19

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This Article Information Sheet is provided as a courtesy in response to a customer request. A Safety Data Sheet (SDS) has not been prepared for these product(s) because they are articles. Articles are not subject to the Occupational Safety and Health Administration's Hazard Communication Standard (29 CFR 1910.1200(b)(6)(v)). As defined in this standard: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees.

Document Group:	34-7684-3	Version Number:	3.09
Issue Date:	11/10/22	Supercedes Date:	09/22/22

SECTION 1: Identification

1.1. Product identifier

Black EPDM Tubing (on plastic core) ==>(LH-A100-1762-5)

Product Identification Numbers

80-6105-9742-1, 80-6105-9752-0, 80-6105-9755-3, 80-6105-9759-5, 80-6105-9760-3, 80-6105-9763-7, 80-6107-3565-8, 80-6107-4803-2, 80-6108-3339-6, 80-6108-3644-9, 80-6109-2831-1, 80-6112-1759-9, 80-6116-1725-1 7000058441, 7100042494, 7100164347, 7000132491, 7100164350, 7100164352, 7100164410, 7100165600, 7100035543, 7100164341

1.2. Recommended use and restrictions on use

Recommended use

Electrical

1.3. Supplier's details	
MANUFACTURER:	3M
DIVISION:	Electrical Markets 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

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Black EPDM Tubing Composite	None	100

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

No need for first aid is anticipated.

Skin Contact:

No need for first aid is anticipated.

Eye Contact:

No need for first aid is anticipated.

If Swallowed:

No need for first aid is anticipated.

SECTION 5: Fire-fighting measures

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Not applicable.

6.2. Environmental precautions

Not applicable.

6.3. Methods and material for containment and cleaning up Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

SECTION 8: Exposure controls/personal protection

This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. No engineering controls or personal protective equipment (PPE) are necessary.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Solid
Color	Black
Odor	Rubber
Odor threshold	Not Applicable
pH	Not Applicable
Melting point	Not Applicable No Data Available
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Density	Not Applicable No Data Available
	No Data Available No Data Available
Specific Gravity	
Solubility in Water	Not Applicable
Solubility- non-water	Not Applicable
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	Not Applicable
Decomposition temperature	No Data Available
Viscosity	Not Applicable
Molecular weight	Not Applicable
Volatile Organic Compounds	No Data Available
Percent volatile	No Data Available
VOC Less H2O & Exempt Solvents	No Data Available
, c c Less mo e la mpt solvents	

SECTION 10: Stability and reactivity

This material is considered to be non reactive under normal use conditions.

SECTION 11: Toxicological information

Inhalation:

No health effects are expected

Skin Contact: No health effects are expected

Eye Contact: No health effects are expected

Ingestion: No health effects are expected

Additional Information:

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

SECTION 12: Ecological information

This article is expected to present a low environmental risk either because use and disposal are unlikely to result in a significant release of components to the environment or because those components that may be released are expected to have insignificant environmental impact.

SECTION 13: Disposal considerations

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

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

Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory requirements.

SECTION 16: Other information

NFPA Hazard Classification

Health: 0 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.

Document Group:	34-7684-3	Version Number:	3.09
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Document Group:	35-7972-9	Version Number:	1.09
Issue Date:	08/29/24	Supercedes Date:	04/01/24

SECTION 1: Identification

1.1. Product identifier

3M[™] Scotchcast[™] Electrical Insulating Resin 4N, Part B

1.2. Recommended use and restrictions on use

Recommended use Electrical, Part B of Resin 4N

1.3. Supplier's details

MANUFACTURER: DIVISION: ADDRESS: Telephone: 3MElectrical Markets Division3M Center, St. Paul, MN 55144-1000, USA1-888-3M 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

Acute Toxicity (oral): Category 4. Serious Eye Damage/Irritation: Category 1. Skin Corrosion/Irritation: Category 1. Skin Sensitizer: Category 1A. Reproductive Toxicity: Category 2. Carcinogenicity: Category 1B. Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements Signal word Danger

Symbols Corrosion | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Suspected of damaging fertility or the unborn child. May cause cancer.

Causes damage to organs through prolonged or repeated exposure: blood or blood-forming organs | respiratory system |

endocrine system | gastrointestinal tract | immune system | liver | kidney/urinary tract |

Precautionary Statements

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves, protective clothing, and eye/face protection. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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 skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns.

Supplemental Information:

Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

18% of the mixture consists of ingredients of unknown acute oral toxicity.

19% of the mixture consists of ingredients of unknown acute dermal toxicity.

77% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Styrenated Phenol	61788-44-1	25 - 70 Trade Secret *
N-AMINOETHYLPIPERAZINE	140-31-8	5 - 22 Trade Secret *
HEAVY NAPHTHENIC DISTILLATE SOLVENT	64742-11-6	5 - 20 Trade Secret *
PETROLEUM EXTRACTS		
Alkyl Acids, Reaction Products With	Trade Secret*	5 - 17 Trade Secret *
Triethylenetetramine		
Alykl Acids, Reaction Products With TETA And	Trade Secret*	4 - 10 Trade Secret *
DGEBA		
Reaction product of cycloaliphatic amine with aromatic	Trade Secret*	1 - 8 Trade Secret *
epoxy resin		
Thermal cracked residuum (petroleum)	64741-80-6	1 - 7 Trade Secret *
PETROLEUM DISTILLATES	Trade Secret*	1 - 7 Trade Secret *
TRIS(2,4,6-	90-72-2	1 - 5 Trade Secret *
DIMETHYLAMINOMONOMETHYL)PHENOL		
TRIETHYLENETETRAMINE	112-24-3	<= 2 Trade Secret *
BIS[(DIMETHYLAMINO)METHYL]PHENOL	71074-89-0	<= 1 Trade Secret *
CARBON BLACK	1333-86-4	< 1 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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:

Immediately flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

Eve Contact:

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

If Swallowed:

Rinse mouth. Do not induce vomiting. Get immediate medical attention.

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

Skin burns (localized redness, swelling, itching, intense pain, blistering, and tissue destruction). Allergic skin reaction (redness, swelling, blistering, and itching). Serious damage to the eyes (corneal cloudiness, severe pain, tearing, ulcerations, and significantly impaired or loss of vision). Target organ effects following prolonged or repeated exposure. See Section 11 for additional details.

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

None inherent in this product.

Hazardous Decomposition or By-Products

Substance Amine Compounds Carbon monoxide Carbon dioxide Oxides of Nitrogen <u>Condition</u> 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

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

Contain spill. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully neutralize spill by adding appropriate dilute acid such as vinegar. Work slowly to avoid boiling or spattering. Continue to add neutralizing agent until reaction stops. Let cool before collecting. Or use a commercially available caustic (alkaline or basic) spill clean-up kit. Follow kit directions exactly. 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

Do not handle until all safety precautions have been read and understood. Do not breathe 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. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Use personal protective equipment (gloves, respirators, etc.) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids.

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
TRIETHYLENETETRAMINE	112-24-3	AIHA	TWA:6 mg/m3(1 ppm)	SKIN
CARBON BLACK	1333-86-4	ACGIH	TWA(inhalable fraction):3	A3: Confirmed animal
			mg/m3	carcin.
CARBON BLACK	1333-86-4	OSHA	TWA:3.5 mg/m3	

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

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: Full Face Shield

Indirect Vented Goggles

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended: Butyl Rubber

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron – Butyl rubber

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 and particulates Half facepiece or full facepiece supplied-air respirator

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

Appearance			
Physical state	Liquid		
Color	Black		
	D '		
Specific Physical Form:	Resin		
Odor	Moderate Amine		
Odor threshold	No Data Available		
рН	10 - 12		
Melting point	No Data Available		
Boiling Point	607 °F		
Flash Point	No flash point		
Evaporation rate	No Data Available		
Flammability (solid, gas)	Not Applicable		
Flammable Limits(LEL)	No Data Available		
Flammable Limits(UEL)	No Data Available		
Vapor Pressure	4.0 mmHg		
Vapor Density	No Data Available		
Density	1.03 g/ml		
Specific Gravity	1.03 [<i>Ref Std</i> :WATER=1]		
Solubility In Water	660 ppm [@, 77 °F]		
Solubility- non-water	No Data Available		
Partition coefficient: n-octanol/ water	No Data Available		
Autoignition temperature	No Data Available		
Decomposition temperature	No Data Available		
Viscosity	3,000 centipoise - 4,500 centipoise $[@, 25 \degree C]$		
Average particle size	No Data Available		
Bulk density	No Data Available		
Molecular weight	Not Applicable		
Volatile Organic Compounds	No Data Available		
Percent volatile	3 - 5 %		
VOC Less H2O & Exempt Solvents	No Data Available		

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 None known.

10.5. Incompatible materials Strong acids

No Data Available

10.6. Hazardous decomposition products **Substance**

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

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:

May be harmful if inhaled. 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:

May be harmful in contact with skin.

Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:

Harmful if swallowed. Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

May cause additional health effects (see below).

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Hematopoietic Effects: Signs/symptoms may include generalized weakness, fatigue and alterations in numbers of circulating blood cells.

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Immunological Effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and /or respiratory reaction, and changes in immune function.

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

Endocrine Effects: Signs/symptoms may include disruption of gonadal, thyroid, adrenal, or pancreatic function; changes in hormone production; alterations in circulating hormone levels; and/or changes in tissue response to hormones.

Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
Fuel oils, residual (heavy)	64741-80-6	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
PETROLEUM DISTILLATES	Trade Secret	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Soot (as found in occupational exposure of chimney sweeps)	1333-86-4	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Soots	1333-86-4	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:

Persons previously sensitized to amines may develop a cross-sensitization reaction to certain other amines.

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	Dermal		No data available; calculated ATE >2,000 - =5,000 mg/kg
Overall product	Inhalation- Dust/Mist(4 hr)		No data available; calculated ATE >5 - =12.5 mg/l
Overall product	Ingestion		No data available; calculated ATE >300 - =2,000 mg/kg
Styrenated Phenol	Dermal	Rat	LD50 > 2,000 mg/kg
Styrenated Phenol	Ingestion	Rat	LD50 > 2,000 mg/kg
N-AMINOETHYLPIPERAZINE	Dermal	Rabbit	LD50 865 mg/kg
N-AMINOETHYLPIPERAZINE	Ingestion	Rat	LD50 1,470 mg/kg
Alkyl Acids, Reaction Products With Triethylenetetramine	Ingestion	Rat	LD50 > 2,000 mg/kg
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Dermal	similar compoun ds	LD50 > 3,000 mg/kg
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Inhalation- Dust/Mist (4 hours)	similar compoun ds	LC50 > 5 mg/l
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Ingestion	similar compoun ds	LD50 > 5,000 mg/kg
Alkyl Acids, Reaction Products With Triethylenetetramine	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
PETROLEUM DISTILLATES	Dermal	similar compoun ds	LD50 > 2,000 mg/kg
PETROLEUM DISTILLATES	Inhalation- Dust/Mist	similar compoun	LC50 4.1 mg/l

	(4 hours)	ds	
PETROLEUM DISTILLATES	Ingestion	similar	LD50 4,320 mg/kg
		compoun	
		ds	
Thermal cracked residuum (petroleum)	Dermal	similar	LD50 > 2,000 mg/kg
		compoun	
		ds	
Thermal cracked residuum (petroleum)	Inhalation-	similar	LC50 4.1 mg/l
	Dust/Mist	compoun	
	(4 hours)	ds	
Thermal cracked residuum (petroleum)	Ingestion	similar	LD50 4,320 mg/kg
		compoun	
		ds	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Dermal	Rat	LD50 1,280 mg/kg
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Ingestion	Rat	LD50 1,000 mg/kg
TRIETHYLENETETRAMINE	Dermal	Rat	LD50 1,465 mg/kg
TRIETHYLENETETRAMINE	Ingestion	Rat	LD50 1,591 mg/kg
BIS[(DIMETHYLAMINO)METHYL]PHENOL	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
CARBON BLACK	Dermal	Rabbit	LD50 > 3,000 mg/kg
CARBON BLACK	Ingestion	Rat	LD50 > 8,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Styrenated Phenol	Rabbit	No significant irritation
		6
N-AMINOETHYLPIPERAZINE	Rabbit	Corrosive
Alkyl Acids, Reaction Products With Triethylenetetramine	In vitro	No significant irritation
	data	
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	similar	Mild irritant
	compoun	
	ds	
PETROLEUM DISTILLATES	similar	No significant irritation
	compoun	-
	ds	
Thermal cracked residuum (petroleum)	similar	No significant irritation
	compoun	
	ds	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
TRIETHYLENETETRAMINE	Rabbit	Corrosive
BIS[(DIMETHYLAMINO)METHYL]PHENOL	similar	Corrosive
	compoun	
	ds	
CARBON BLACK	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Styrenated Phenol	Rabbit	Mild irritant
N-AMINOETHYLPIPERAZINE	Rabbit	Corrosive
Alkyl Acids, Reaction Products With Triethylenetetramine	In vitro data	Severe irritant
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	similar compoun ds	No significant irritation
PETROLEUM DISTILLATES	similar compoun ds	Mild irritant
Thermal cracked residuum (petroleum)	similar compoun ds	Mild irritant
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
TRIETHYLENETETRAMINE	Rabbit	Corrosive
BIS[(DIMETHYLAMINO)METHYL]PHENOL	similar	Corrosive

	compoun ds	
CARBON BLACK	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Styrenated Phenol	Mouse	Sensitizing
N-AMINOETHYLPIPERAZINE	Guinea	Sensitizing
	pig	
Alkyl Acids, Reaction Products With Triethylenetetramine	Guinea	Sensitizing
	pig	
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	similar	Not classified
	compoun	
	ds	
PETROLEUM DISTILLATES	Guinea	Not classified
	pig	
Thermal cracked residuum (petroleum)	similar	Not classified
	compoun	
	ds	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Guinea	Not classified
	pig	
TRIETHYLENETETRAMINE	Guinea	Sensitizing
	pig	

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
N-AMINOETHYLPIPERAZINE	In vivo	Not mutagenic
N-AMINOETHYLPIPERAZINE	In Vitro	Some positive data exist, but the data are not sufficient for classification
Alkyl Acids, Reaction Products With Triethylenetetramine	In Vitro	Not mutagenic
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	In Vitro	Some positive data exist, but the data are not sufficient for classification
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	In vivo	Some positive data exist, but the data are not sufficient for classification
PETROLEUM DISTILLATES	In Vitro	Some positive data exist, but the data are not sufficient for classification
Thermal cracked residuum (petroleum)	In Vitro	Some positive data exist, but the data are not sufficient for classification
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	In Vitro	Not mutagenic
TRIETHYLENETETRAMINE	In vivo	Not mutagenic
TRIETHYLENETETRAMINE	In Vitro	Some positive data exist, but the data are not sufficient for classification
CARBON BLACK	In Vitro	Not mutagenic
CARBON BLACK	In vivo	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM	Dermal	similar	Carcinogenic
EXTRACTS		compoun	
		ds	
PETROLEUM DISTILLATES	Dermal	similar	Carcinogenic
		compoun	
		ds	
Thermal cracked residuum (petroleum)	Dermal	similar	Carcinogenic
		compoun	
		ds	
TRIETHYLENETETRAMINE	Dermal	Mouse	Not carcinogenic
CARBON BLACK	Dermal	Mouse	Not carcinogenic
CARBON BLACK	Ingestion	Mouse	Not carcinogenic

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CARBON BLACK

Inhalation Rat Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
N-AMINOETHYLPIPERAZINE	Ingestion	Not classified for female reproduction	Rat	NOAEL 598 mg/kg/day	premating & during gestation
N-AMINOETHYLPIPERAZINE	Ingestion	Not classified for male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-AMINOETHYLPIPERAZINE	Ingestion	Toxic to development	Rabbit	NOAEL 75 mg/kg/day	during gestation
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Ingestion	Not classified for male reproduction	similar compoun ds	NOAEL 125 mg/kg/day	13 weeks
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Dermal	Toxic to development	similar compoun ds	NOAEL 5 mg/kg/day	during gestation
PETROLEUM DISTILLATES	Dermal	Toxic to development	similar compoun ds	NOAEL 0.05 mg/kg/day	during gestation
Thermal cracked residuum (petroleum)	Dermal	Toxic to development	similar compoun ds	NOAEL 0.05 mg/kg/day	during gestation
TRIS(2,4,6- DIMETHYLAMINOMONOMETHYL)PH ENOL	Ingestion	Not classified for male reproduction	Rat	NOAEL 150 mg/kg/day	2 generation
TRIS(2,4,6- DIMETHYLAMINOMONOMETHYL)PH ENOL	Ingestion	Not classified for female reproduction	Rat	NOAEL 50 mg/kg/day	2 generation
TRIS(2,4,6- DIMETHYLAMINOMONOMETHYL)PH ENOL	Ingestion	Not classified for development	Rabbit	NOAEL 15 mg/kg/day	during gestation
TRIETHYLENETETRAMINE	Dermal	Not classified for development	Rabbit	NOAEL 125 mg/kg/day	during organogenesi s
TRIETHYLENETETRAMINE	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during organogenesi s

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
N- AMINOETHYLPIPERAZI NE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
Alkyl Acids, Reaction Products With Triethylenetetramine	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	
TRIETHYLENETETRAM INE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
N- AMINOETHYLPIPERAZI NE	Dermal	skin	Not classified	Rat	NOAEL 100 mg/kg/day	29 days
N- AMINOETHYLPIPERAZI NE	Dermal	hematopoietic system nervous system kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	29 days
N- AMINOETHYLPIPERAZI NE	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.2 mg/m3	13 weeks
N- AMINOETHYLPIPERAZI NE	Inhalation	hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 53.8 mg/m3	13 weeks
N- AMINOETHYLPIPERAZI NE	Ingestion	heart endocrine system hematopoietic system liver nervous system kidney and/or bladder	Not classified	Rat	NOAEL 598 mg/kg/day	28 days
HEAVY NAPHTHENIC DISTILLATE SOLVENT PETROLEUM EXTRACTS	Dermal	endocrine system gastrointestinal tract hematopoietic system liver immune system kidney and/or bladder	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	LOAEL 30 mg/kg/day	90 days
PETROLEUM DISTILLATES	Dermal	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL 1.06 mg/kg/day	13 weeks
PETROLEUM DISTILLATES	Dermal	liver immune system	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	NOAEL 10.6 mg/kg/day	13 weeks
Thermal cracked residuum (petroleum)	Dermal	hematopoietic system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL 1.06 mg/kg/day	13 weeks
Thermal cracked residuum (petroleum)	Dermal	liver immune system	May cause damage to organs though prolonged or repeated exposure	similar compoun ds	NOAEL 10.6 mg/kg/day	13 weeks
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Dermal	skin	Not classified	Rat	NOAEL 25 mg/kg/day	4 weeks
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Dermal	liver nervous system auditory system hematopoietic system eyes	Not classified	Rat	NOAEL 125 mg/kg/day	4 weeks
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Ingestion	heart endocrine system hematopoietic system liver muscles nervous system kidney and/or bladder respiratory system vascular system auditory system skin gastrointestinal tract bone, teeth, nails, and/or hair immune system eyes	Not classified	Rat	NOAEL 150 mg/kg/day	90 days
CARBON BLACK	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure

Aspiration Hazard

Name	Value
PETROLEUM DISTILLATES	Aspiration hazard
Thermal cracked residuum (petroleum)	Aspiration hazard

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. 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.

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EPCRA 311/312 Hazard Classifications:	
Physical Hazards	
Not applicable	
Health Hazards	
Acute toxicity	
Carcinogenicity	
Hazard Not Otherwise Classified (HNOC)	
Reproductive toxicity	

Respiratory or Skin Sensitization
Serious eye damage or eye irritation
Skin Corrosion or Irritation
Specific target organ toxicity (single or repeated exposure)

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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.

HMIS Hazard ClassificationHealth: *3Flammability: 1Physical Hazard: 0Personal 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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