

Safety Data Sheet

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 Document Group:
 26-1142-4
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Product identifier

3MTM ScotchcastTM Electrical Insulating Resin 4 Kit

ID Number(s):

78-8111-0945-9, 78-8111-0947-5, 78-8111-0948-3, 78-8111-0949-1, 78-8111-0950-9, 78-8111-0951-7, 80-6109-7349-9, 80-6109-8166-6, 80-6109-8167-4, 80-6109-8168-2, 80-6109-8169-0, 80-6109-8170-8, 80-6109-8171-6, 80-6109-8241-7, 80-6109-8242-5

Recommended use

Electrical, TWO PART CURING RESIN FOR ELECTRICAL INSULATION

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)

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:

24-9869-9, 24-9848-3

Reason for Reissue

Conversion to GHS format SDS.

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3MTM ScotchcastTM Electrical Insulating Resin 4 Kit 06/01/16

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Document Group:24-9848-3Version Number:3.00Issue Date:05/22/18Supercedes Date:01/04/18

SECTION 1: Identification

1.1. Product identifier

3M™ Scotchcast™ Electrical Insulating Resin 4, Part A and 3M™ Scotchcast™ Electrical Insulating Resin 4N, 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 eve 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	0 - 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.

Eve 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

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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

Carbon monoxide Carbon dioxide Toxic Vapor, Gas, Particulate

Condition

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. 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.

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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

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

General Physical Form:Specific Physical Form:
Resin

Odor, Color, Grade: Clear, amber resin with epoxy odor

Odor thresholdNo Data AvailablepHNo Data AvailableMelting pointNo Data Available

Boiling Point >= 201 °F

Flash Point >= 201 °F [Test Method:Closed Cup]

Evaporation rate No Data Available

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Flammability (solid, gas)

Flammable Limits(LEL)

Flammable Limits(UEL)

Vapor Pressure

Vapor Density

No Data Available

<= 27 psia [@ 131 °F]

No Data Available

Density 1.16 g/ml

Specific Gravity 1.16 [Ref Std:WATER=1]

Solubility in WaterNegligibleSolubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableAutoignition temperatureNo Data AvailableDecomposition temperatureNo Data Available

Viscosity 3,000 centipoise - 5,000 centipoise

Average particle size

Bulk density

No Data Available

Hazardous Air Pollutants

No Data Available

Molecular weight

No Data Available

No Data Available

Volatile Organic Compounds

No Data Available

Percent volatile Negligible

Softening pointNo Data AvailableVOC Less H2O & Exempt SolventsNo 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

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

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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:

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	Species	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
	pig	

Respiratory Sensitization

Name	Species Value
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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

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

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 system liver eyes kidney and/or bladder	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
OXIRANE, MONO[(C12-	Dermal	nervous system	Not classified	Rat	NOAEL 100	14 weeks

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14- ALKYLOXY)METHYL] DERIVATIVES		respiratory system			mg/kg/day	
OXIRANE, MONO[(C12- 14-	Dermal	blood liver eyes kidnev and/or	Not classified	Rat	NOAEL 100 mg/kg/day	13 weeks
ALKYLOXY)METHYL] DERIVATIVES		bladder			<i>8 8 m</i>	

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 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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Reason for Reissue

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Document Group: 24-9869-9 **Version Number:** 5.01 **Issue Date:** 01/26/17 **Supercedes Date:** 10/31/14

SECTION 1: Identification

1.1. Product identifier

3MTM ScotchcastTM Electrical Insulating Resin 4, Part B

1.2. Recommended use and restrictions on use

Recommended use

Electrical, PART B OF RESIN 4

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

Acute Toxicity (oral): Category 4.
Acute Toxicity (dermal): Category 4.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1B.
Respiratory Sensitizer: Category 1.
Skin Sensitizer: Category 1A.
Reproductive Toxicity: Category 2.
Carcinogenicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

Harmful if swallowed.

Harmful in contact with skin.

Causes severe skin burns and eye damage.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

May cause cancer.

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.

In case of inadequate ventilation wear respiratory protection.

Wear protective gloves, protective clothing, and eye/face protection.

Wear protective gloves.

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 experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

If skin irritation or rash occurs: Get medical advice/attention.

Take off contaminated clothing and wash it before reuse.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF exposed or concerned: Get medical advice/attention.

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.

44% of the mixture consists of ingredients of unknown acute oral toxicity.

44% of the mixture consists of ingredients of unknown acute dermal toxicity.

SECTION 3: Composition/information on ingredients

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PHENOL, 4-NONYL-, branched	84852-15-3	15 - 40 Trade Secret *
HEAVY NAPHTHENIC DISTILLATE SOLVENT	64742-11-6	5 - 20 Trade Secret *
PETROLEUM EXTRACTS		
N-AMINOETHYLPIPERAZINE	140-31-8	5 - 20 Trade Secret *
REACTION PRODUCTS WITH	Trade Secret*	5 - 20 Trade Secret *
TRIETHYLENETETRAMINE		
REACTION PRODUCTS WITH TETA AND DGEBA	Trade Secret*	4 - 10 Trade Secret *
PETROLEUM DISTILLATES	Trade Secret*	1 - 6 Trade Secret *
REACTION PRODUCTS WITH ETHER	Trade Secret*	1 - 6 Trade Secret *
TRIS(2,4,6-	90-72-2	1 - 5 Trade Secret *
DIMETHYLAMINOMONOMETHYL)PHENOL		
TRIETHYLENETETRAMINE	112-24-3	1 - 3 Trade Secret *
CARBON BLACK	1333-86-4	< 1 Trade Secret *
DIETHYLENETRIAMINE	111-40-0	0 - 0.2 Trade Secret *
(2-AMINOETHYL)ETHANOLAMINE	111-41-1	0 - 0.12 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.

Eye 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

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

Amine Compounds During Combustion

Condition

Carbon monoxide Carbon dioxide Oxides of Nitrogen 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.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. 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 in a well-ventilated place. Keep container tightly closed. 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.

Tot the component:				
Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
DIETHYLENETRIAMINE	111-40-0	ACGIH	TWA:1 ppm	SKIN
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. 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 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

General Physical Form:

Specific Physical Form:

Resin

Odor, Color, Grade: Smooth, black liquid with amine odor

Odor threshold *No Data Available*

Boiling Point >= 200 °F

Flash Point >= 200 °F [Test Method: Closed Cup]

Evaporation rateNo Data AvailableFlammability (solid, gas)Not ApplicableFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data AvailableVapor Pressure<= 27 psia [@ 131 °F]</th>Vapor DensityNo Data Available

Density 1.04 g/ml

3MTM ScotchcastTM Electrical Insulating Resin 4, Part B

01/26/17

Specific Gravity 1.04 [Ref Std: WATER=1]

Solubility in Water Negligible

Solubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableDecomposition temperatureNo Data Available

Viscosity 2,200 centipoise - 3,500 centipoise

Average particle sizeNo Data AvailableBulk densityNo Data AvailableHazardous Air PollutantsNo Data AvailableMolecular weightNo Data AvailableVolatile Organic CompoundsNo Data Available

Percent volatile 3 % - 5 %

Softening point VOC Less H2O & Exempt SolventsNo Data Available

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.

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

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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.

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

Skin Contact:

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.

Eve 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.

Additional Health Effects:

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.

<u>Ingredient</u>	CAS No.	Class Description	Regulation
CARBON BLACK	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

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 1,000 - 2,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE 300 - 2,000 mg/kg
PHENOL, 4-NONYL-, branched	Dermal	Rabbit	LD50 > 2,000 mg/kg
PHENOL, 4-NONYL-, branched	Ingestion	Rat	LD50 1,531 mg/kg
N-AMINOETHYLPIPERAZINE	Dermal	Rabbit	LD50 865 mg/kg
N-AMINOETHYLPIPERAZINE	Ingestion	Rat	LD50 1,470 mg/kg
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	Rabbit	LD50 550 mg/kg
TRIETHYLENETETRAMINE	Ingestion	Rat	LD50 2,500 mg/kg
DIETHYLENETRIAMINE	Dermal	Rabbit	LD50 1,045 mg/kg
DIETHYLENETRIAMINE	Inhalation-	Rat	LC50 > 0.07 mg/l
	Dust/Mist		
	(4 hours)		
DIETHYLENETRIAMINE	Ingestion	Rat	LD50 819 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
PHENOL, 4-NONYL-, branched	Rabbit	Corrosive
N-AMINOETHYLPIPERAZINE	Rabbit	Corrosive
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
TRIETHYLENETETRAMINE	Rabbit	Corrosive
DIETHYLENETRIAMINE	Rabbit	Corrosive
CARBON BLACK	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
PHENOL, 4-NONYL-, branched	Rabbit	Corrosive
N-AMINOETHYLPIPERAZINE	Rabbit	Corrosive
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Rabbit	Corrosive
TRIETHYLENETETRAMINE	Rabbit	Corrosive
DIETHYLENETRIAMINE	Rabbit	Corrosive
CARBON BLACK	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
PHENOL, 4-NONYL-, branched	Guinea	Not sensitizing
	pig	
N-AMINOETHYLPIPERAZINE	Guinea	Sensitizing
	pig	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	Guinea	Some positive data exist, but the data are not
	pig	sufficient for classification
TRIETHYLENETETRAMINE	Guinea	Sensitizing
	pig	
DIETHYLENETRIAMINE	Guinea	Sensitizing
	pig	

Respiratory Sensitization

Name	Species	Value
DIETHYLENETRIAMINE	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value	
PHENOL, 4-NONYL-, branched	In Vitro	Not mutagenic	
PHENOL, 4-NONYL-, branched	In vivo	Not mutagenic	
N-AMINOETHYLPIPERAZINE	In vivo	Not mutagenic	
N-AMINOETHYLPIPERAZINE	In Vitro	Some positive data exist, but the data are not sufficient for classification	
TRIS(2,4,6-DIMETHYLAMINOMONOMETHYL)PHENOL	In Vitro	Not mutagenic	
DIETHYLENETRIAMINE	In Vitro	Not mutagenic	
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
DIETHYLENETRIAMINE	Dermal	Multiple	Not carcinogenic
		animal	
		species	
CARBON BLACK	Dermal	Mouse	Not carcinogenic
CARBON BLACK	Ingestion	Mouse	Not carcinogenic
CARBON BLACK	Inhalation	Rat	Carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
PHENOL, 4-NONYL-, branched	Ingestion	Some positive male reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	28 days
PHENOL, 4-NONYL-, branched	Ingestion	Toxic to female reproduction	official classifica tion	NOAEL Not available	
PHENOL, 4-NONYL-, branched	Ingestion	Toxic to development	official classifica tion	NOAEL Not available	
N-AMINOETHYLPIPERAZINE	Ingestion	Not toxic to female reproduction	Rat	NOAEL 598 mg/kg/day	premating & during gestation
N-AMINOETHYLPIPERAZINE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 409 mg/kg/day	32 days
N-AMINOETHYLPIPERAZINE	Ingestion	Not toxic to development	Rat	NOAEL 899 mg/kg/day	premating & during gestation
DIETHYLENETRIAMINE	Ingestion	Not toxic to male reproduction	Rat	NOAEL 300 mg/kg/day	28 days
DIETHYLENETRIAMINE	Ingestion	Not toxic to development	Rat	NOAEL 300 mg/kg/day	premating & during gestation
DIETHYLENETRIAMINE	Ingestion	Some positive female reproductive data exist, but the data are not sufficient for classification	Rat	NOAEL 30 mg/kg/day	premating & during gestation

Lactation

Name	Route	Species	Value
PHENOL, 4-NONYL-, branched	Ingestion	Rat	Does not cause effects on or via lactation

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	
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
DIETHYLENETRIAMIN E	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
PHENOL, 4-NONYL-, branched	Ingestion	endocrine system hematopoietic system liver	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 400 mg/kg/day	28 days
PHENOL, 4-NONYL-, branched	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 150 mg/kg/day	90 days
PHENOL, 4-NONYL-, branched	Ingestion	heart bone, teeth, nails, and/or hair immune system muscles nervous system respiratory	All data are negative	Rat	NOAEL 150 mg/kg/day	90 days

		system				
N- AMINOETHYLPIPERAZI NE	Ingestion	heart endocrine system hematopoietic system liver nervous system kidney and/or bladder	All data are negative	Rat	NOAEL 598 mg/kg/day	28 days
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Dermal	skin liver nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 125 mg/kg/day	28 days
TRIS(2,4,6- DIMETHYLAMINOMON OMETHYL)PHENOL	Dermal	auditory system hematopoietic system eyes	All data are negative	Rat	NOAEL 125 mg/kg/day	28 days
DIETHYLENETRIAMIN E	Ingestion	endocrine system liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 1,210 mg/kg/day	90 days
CARBON BLACK	Inhalation	pneumoconiosis	Some positive data exist, but the data are not sufficient for classification	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.

Incinerate uncured product 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.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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

<u>Ingredient (Category if applicable)</u>	C.A.S. No	Regulation	<u>Status</u>
PHENOL, 4-NONYL-, branched (Phenol, 4-nonyl-,	84852-15-3	Toxic Substances Control Act (TSCA) 5	Proposed
branched)		SNUR or Consent Order Chemicals	
PHENOL, 4-NONYL-, branched	84852-15-3	Toxic Substances Control Act (TSCA) 5	Proposed
		SNUR or Consent Order Chemicals	

This material contains a chemical subject to a proposed EPA Significant New Use Rule (TSCA Section 5)

Ingredient (Category if applicable)	C.A.S. No	Reference
PHENOL 4-NONYL- branched	84852-15-3	79 FR 59186

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.

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 Classification

Health: *3 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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Conversion to GHS format SDS.

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