

Safety Data Sheet

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Product identifier

3MTM ScotchcastTM Electrical Resin 251 (A & B)

ID Number(s):

80-1300-0330-6, 80-6116-0624-7, 80-6116-2527-0, 80-6116-2528-8, 80-7002-5102-0

Recommended use

Electrical, Two part electrical curing resin

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:

25-0443-9, 25-8677-4

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3MTM ScotchcastTM Electrical Resin 251 (A & B)

02/28/18

3M USA SDSs are available at www.3M.com



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 Document Group:
 25-0443-9
 Version Number:
 2.00

 Issue Date:
 10/22/18
 Supercedes Date:
 02/15/18

SECTION 1: Identification

1.1. Product identifier

3MTM ScotchcastTM Electrical Resin 251 Part B

Product Identification Numbers

LH-A100-0567-9, LH-A100-0568-0, LH-A100-2363-6, LH-A100-2363-7

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part B of two part electrical resin, Resin

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.

Serious Eye Damage/Irritation: Category 1.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1A. Carcinogenicity: Category 1B.

2.2. Label elements

Signal word

Danger

Symbols

Corrosion | Exclamation mark | Health Hazard |

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Pictograms



Hazard Statements

Harmful if swallowed.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause cancer.

Precautionary Statements

Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

In case of inadequate ventilation wear respiratory protection.

Wear 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: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

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

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

Continue rinsing.

IF ON SKIN: Wash with plenty of soap and water.

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

Rinse mouth.

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

Storage:

Store locked up.

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
TALC	14807-96-6	30 - 40 Trade Secret *
HEXAHYDROPHTHALIC ANHYDRIDE	85-42-7	25 - 35 Trade Secret *
POLYMER	16726-03-7	20 - 30 Trade Secret *
4-CYCLOHEXENE-1,2-DICARBOXYLIC ANHYDRIDE, 4-(4-METHYL-3-PENTENYL)-	29811-04-9	5 - 10 Trade Secret *
CALCITE	13397-26-7	0 - 5

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3MTM ScotchcastTM	Electrical Resin	251 Part R	10/22/18
SIVI SCOTCHCAST	Electrical Econ	1 4 JI I AI L D	10/44/10

CHLORITE (MINERAL)	1318-59-8	0 - 5
DOLOMITE	16389-88-1	0 - 5
MAGNESIUM CARBONATE	546-93-0	0 - 5
MALEIC ANHYDRIDE	108-31-6	< 1 Trade Secret *
MYRCENE	123-35-3	< 0.5 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 wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

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. 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

Substance	<u>Condition</u>
Aldehydes	During Combustion
Formaldehyde	During Combustion
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.

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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

For industrial/occupational use only. Not for consumer sale or use. 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

No special storage requirements.

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
MALEIC ANHYDRIDE	108-31-6	ACGIH	TWA(inhalable fraction and	Sensitizer, A4: Not
			vapor):0.01 mg/m3;TWA:0.01	class. as human carcin,
			mg/m3	Dermal/Respiratory
				Sensitizer
MALEIC ANHYDRIDE	108-31-6	OSHA	TWA:1 mg/m3(0.25 ppm)	
TALC	14807-96-6	ACGIH	TWA(respirable fraction):2	A4: Not class. as human
			mg/m3	carcin
TALC	14807-96-6	OSHA	TWA:2 mg/m3	
MAGNESIUM CARBONATE	546-93-0	OSHA	TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):5 mg/m3	
HEXAHYDROPHTHALIC	85-42-7	ACGIH	CEIL(inhalable fraction and	Respiratory Sensitizer
ANHYDRIDE			vapor):0.005 mg/m3	

ACGIH: American Conference of Governmental Industrial Hygienists

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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 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

General Physical Form: Liquid

Odor, Color, Grade: Buff colored liquid with maleic odor

Odor thresholdNo Data AvailablepHNot ApplicableMelting pointNo Data Available

Boiling Point >=265 °F

Flash Point 265 °F [Test Method: Closed Cup]

Evaporation rateNo Data AvailableFlammability (solid, gas)Not ApplicableFlammable Limits(LEL)No Data Available

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Flammable Limits(UEL)

Vapor Pressure

Vapor Density

No Data Available

No Data Available

No Data Available

Density 1.48 g/ml

Specific Gravity1.48 [Ref Std: WATER=1]Solubility in WaterSlight (less than 10%)Solubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableAutoignition temperatureNo Data AvailableDecomposition temperatureNo Data Available

Viscosity 3,500 centipoise - 9,000 centipoise

Average particle sizeNot ApplicableBulk densityNo Data AvailableHazardous Air PollutantsNo Data AvailableMolecular weightNo Data AvailableVolatile Organic CompoundsNo 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

<u>Substance</u> <u>Condition</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 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.

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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.

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

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.

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

May cause additional health effects (see below).

Additional Health Effects:

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
MYRCENE	123-35-3	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	Ingestion		No data available; calculated ATE300 - 2,000 mg/kg
TALC	Dermal		LD50 estimated to be > 5,000 mg/kg
TALC	Ingestion		LD50 estimated to be > 5,000 mg/kg
HEXAHYDROPHTHALIC ANHYDRIDE	Dermal	Rabbit	LD50 > 2,000 mg/kg
HEXAHYDROPHTHALIC ANHYDRIDE	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 1.1 mg/l
HEXAHYDROPHTHALIC ANHYDRIDE	Ingestion	Rat	LD50 2,700 mg/kg
POLYMER	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
4-CYCLOHEXENE-1,2-DICARBOXYLIC ANHYDRIDE, 4-(4-METHYL-3-PENTENYL)-	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
CHLORITE (MINERAL)	Dermal		LD50 estimated to be > 5,000 mg/kg
CHLORITE (MINERAL)	Ingestion		LD50 estimated to be > 5,000 mg/kg
DOLOMITE	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
MAGNESIUM CARBONATE	Dermal		LD50 estimated to be > 5,000 mg/kg
MAGNESIUM CARBONATE	Ingestion	Mouse	LD50 > 5,000 mg/kg

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2MTM ScotchoostTM Floatwicel Dosin 251 Dant D	10/22/19	

CALCITE	Dermal	Rat	LD50 > 2,000 mg/kg
CALCITE	Inhalation-	Rat	LC50 3 mg/l
	Dust/Mist		
	(4 hours)		
CALCITE	Ingestion	Rat	LD50 6,450 mg/kg
DOLOMITE	Ingestion	Rat	LD50 > 2,000 mg/kg
MALEIC ANHYDRIDE	Dermal	Rabbit	LD50 2,620 mg/kg
MALEIC ANHYDRIDE	Ingestion	Rat	LD50 400 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
TALC	Rabbit	No significant irritation
HEXAHYDROPHTHALIC ANHYDRIDE	Rabbit	Minimal irritation
CALCITE	Rabbit	No significant irritation
CHLORITE (MINERAL)	Professio	No significant irritation
	nal	
	judgeme	
	nt	
DOLOMITE	Professio	No significant irritation
	nal	
	judgeme	
	nt	
MAGNESIUM CARBONATE	In vitro	Minimal irritation
	data	
MALEIC ANHYDRIDE	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
TALC	Rabbit	No significant irritation
HEXAHYDROPHTHALIC ANHYDRIDE	Rabbit	Corrosive
CALCITE	Rabbit	No significant irritation
CHLORITE (MINERAL)	Professio	No significant irritation
	nal	
	judgeme	
	nt	
DOLOMITE	Professio	No significant irritation
	nal	
	judgeme	
	nt	
MAGNESIUM CARBONATE	Rabbit	Mild irritant
MALEIC ANHYDRIDE	Rabbit	Corrosive

Skin Sensitization

SILLI SUISIULWIOI		
Name	Species	Value
HEXAHYDROPHTHALIC ANHYDRIDE	Guinea	Sensitizing
	pig	
MALEIC ANHYDRIDE	Multiple	Sensitizing
	animal	
	species	

Respiratory Sensitization

Name	Species	Value
TALC	Human	Not classified
HEXAHYDROPHTHALIC ANHYDRIDE	Human	Sensitizing
MALEIC ANHYDRIDE	Human	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value

3MTM	ScotchcastTM	Flactrical	Rosin 251	Part R

TALC	In Vitro	Not mutagenic
TALC	In vivo	Not mutagenic
HEXAHYDROPHTHALIC ANHYDRIDE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
TALC	Inhalation	Rat	Some positive data exist, but the data are not
			sufficient for classification
MYRCENE	Ingestion	Multiple	Carcinogenic
		animal	
		species	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
TALC	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
CALCITE	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

specific ranger organi romeity single exposure						
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure
						Duration
HEXAHYDROPHTHALI	Inhalation	respiratory irritation	Some positive data exist, but the	Human	NOAEL Not	occupational
C ANHYDRIDE			data are not sufficient for		available	exposure
			classification			
CALCITE	Inhalation	respiratory system	Not classified	Rat	NOAEL	90 minutes
					0.812 mg/l	
MALEIC ANHYDRIDE	Inhalation	respiratory irritation	May cause respiratory irritation	Human	LOAEL	occupational
					0.001 mg/l	exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
TALC	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
TALC	Inhalation	pulmonary fibrosis respiratory system	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
CALCITE	Inhalation	respiratory system	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

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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.

EPCRA 311/312 Hazard Classifications:

Physical	Hazards
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Not applicable

Health Hazards

Acute toxicity

Carcinogenicity

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 China "Measures on Environmental Management of New Chemical Substance". 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.

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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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 Issue Date:
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 01/04/18

SECTION 1: Identification

1.1. Product identifier

3MTM ScotchcastTM Electrical Resin 251 Part A

Product Identification Numbers

LH-A100-0567-5, LH-A100-0567-6, LH-A100-2363-3, LH-A100-2363-4

1.2. Recommended use and restrictions on use

Recommended use

Electrical, Part A of two part electrical resin

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 1. Carcinogenicity: Category 1A.

Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word

Danger

Symbols

Exclamation mark | Health Hazard |

Pictograms

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Hazard Statements

Causes eye irritation.

May cause an allergic skin reaction.

May cause cancer.

Causes damage to organs through prolonged or repeated exposure: respiratory system

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.

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 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.

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.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
EPOXY RESIN	25068-38-6	50 - 65 Trade Secret *
TALC	14807-96-6	30 - 40 Trade Secret *
CALCITE	13397-26-7	0 - 5 Trade Secret *
CHLORITE (MINERAL)	1318-59-8	0 - 5 Trade Secret *
DOLOMITE	16389-88-1	0 - 5 Trade Secret *
MAGNESIUM CARBONATE	546-93-0	0 - 5 Trade Secret *
IRON OXIDE	1332-37-2	0 - 1 Trade Secret *
IRON OXIDE (FE3O4)	1317-61-9	0 - 1 Trade Secret *
QUARTZ SILICA	14808-60-7	0 - 1 Trade Secret *
CARBON BLACK	1333-86-4	0 - 0.1 Trade Secret *

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*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

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

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

SubstanceConditionAldehydesDuring CombustionCarbon monoxideDuring CombustionCarbon dioxideDuring Combustion

5.3. Special protective actions for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. 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.

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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

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

No special storage requirements.

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
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	
TALC	14807-96-6	ACGIH	TWA(respirable fraction):2	A4: Not class. as human
			mg/m3	carcin
TALC	14807-96-6	OSHA	TWA:2 mg/m3	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA Table Z-	
			1(respirable):0.05	
			mg/m3;TWA Table Z-	
			3(respirable):0.1 mg/m3	
MAGNESIUM CARBONATE	546-93-0	OSHA	TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):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:

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

General Physical Form:Specific Physical Form:
Viscous

Odor, Color, Grade: Rust red paste with epoxy odor

Odor thresholdNo Data AvailablepHNo Data AvailableMelting pointNo Data Available

Boiling Point >= 200 °F

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

Evaporation rateNo Data AvailableFlammability (solid, gas)Not ApplicableFlammable Limits(LEL)Not ApplicableFlammable Limits(UEL)Not ApplicableVapor PressureNo Data AvailableVapor DensityNo Data Available

Density 1.52 g/ml

Specific Gravity 1.52 [Ref Std: WATER=1]

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Solubility in Water Negligible

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

Viscosity 170,000 centipoise - 320,000 centipoise

Average particle size

Bulk density

No Data Available

Hazardous Air Pollutants

No Data Available

Molecular weight

No Data Available

Percent volatile Nil

Softening point

No Data Available

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> <u>Condition</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 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 cause additional health effects (see below).

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.

Eve 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.

Additional Health Effects:

Prolonged or repeated exposure may cause target organ effects:

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Ingredient	CAS No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
CARBON BLACK	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	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	Ingestion		No data available; calculated ATE >5,000 mg/kg
EPOXY RESIN	Dermal	Rat	LD50 > 1,600 mg/kg
EPOXY RESIN	Ingestion	Rat	LD50 > 1,000 mg/kg
TALC	Dermal		LD50 estimated to be > 5,000 mg/kg
TALC	Ingestion		LD50 estimated to be > 5,000 mg/kg
CHLORITE (MINERAL)	Dermal		LD50 estimated to be > 5,000 mg/kg
CHLORITE (MINERAL)	Ingestion		LD50 estimated to be > 5,000 mg/kg
DOLOMITE	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
MAGNESIUM CARBONATE	Dermal		LD50 estimated to be > 5,000 mg/kg
MAGNESIUM CARBONATE	Ingestion	Mouse	LD50 > 5,000 mg/kg
CALCITE	Dermal	Rat	LD50 > 2,000 mg/kg
CALCITE	Inhalation-	Rat	LC50 3 mg/l
	Dust/Mist		
	(4 hours)		
CALCITE	Ingestion	Rat	LD50 6,450 mg/kg
DOLOMITE	Ingestion	Rat	LD50 > 2,000 mg/kg
IRON OXIDE	Dermal	Not	LD50 3,100 mg/kg
		available	
IRON OXIDE	Ingestion	Not	LD50 3,700 mg/kg
		available	
QUARTZ SILICA	Dermal		LD50 estimated to be > 5,000 mg/kg
QUARTZ SILICA	Ingestion		LD50 estimated to be > 5,000 mg/kg
IRON OXIDE (FE3O4)	Dermal	Not	LD50 3,100 mg/kg
		available	

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3MTM ScotchcastTM	Electrical Resin 251 I	Part A	10/22/18

IRON OXIDE (FE3O4)	Ingestion	Not	LD50 3,700 mg/kg
		available	
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
EPOXY RESIN	Rabbit	Mild irritant
TALC	Rabbit	No significant irritation
CALCITE	Rabbit	No significant irritation
CHLORITE (MINERAL)	Professio	No significant irritation
	nal	
	judgeme	
	nt	
DOLOMITE	Professio	No significant irritation
	nal	
	judgeme	
	nt	
MAGNESIUM CARBONATE	In vitro	Minimal irritation
	data	
IRON OXIDE	Rabbit	No significant irritation
QUARTZ SILICA	Professio	No significant irritation
	nal	
	judgeme	
	nt	
CARBON BLACK	Rabbit	No significant irritation
IRON OXIDE (FE3O4)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
EPOXY RESIN	Rabbit	Moderate irritant
TALC	Rabbit	No significant irritation
CALCITE	Rabbit	No significant irritation
CHLORITE (MINERAL)	Professio	No significant irritation
	nal	
	judgeme	
	nt	
DOLOMITE	Professio	No significant irritation
	nal	
	judgeme	
	nt	
MAGNESIUM CARBONATE	Rabbit	Mild irritant
IRON OXIDE	Rabbit	No significant irritation
CARBON BLACK	Rabbit	No significant irritation
IRON OXIDE (FE3O4)	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
EPOXY RESIN	Human	Sensitizing
	and	
	animal	
IRON OXIDE	Human	Not classified
IRON OXIDE (FE3O4)	Human	Not classified

Respiratory Sensitization

respiratory sensitization		
Name	Species	Value
EPOXY RESIN	Human	Not classified
TALC	Human	Not classified

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Germ Cell Mutagenicity

Name	Route	Value
EPOXY RESIN	In vivo	Not mutagenic
EPOXY RESIN	In Vitro	Some positive data exist, but the data are not sufficient for classification
TALC	In Vitro	Not mutagenic
TALC	In vivo	Not mutagenic
IRON OXIDE	In Vitro	Not mutagenic
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In vivo	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
IRON OXIDE (FE3O4)	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
EPOXY RESIN	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
TALC	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
IRON OXIDE	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	Inhalation	Human and animal	Carcinogenic
CARBON BLACK	Dermal	Mouse	Not carcinogenic
CARBON BLACK	Ingestion	Mouse	Not carcinogenic
CARBON BLACK	Inhalation	Rat	Carcinogenic
IRON OXIDE (FE3O4)	Inhalation	Human	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
EPOXY RESIN	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Ingestion	Not classified for male reproduction	Rat	NOAEL 750 mg/kg/day	2 generation
EPOXY RESIN	Dermal	Not classified for development	Rabbit	NOAEL 300 mg/kg/day	during organogenesi s
EPOXY RESIN	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	2 generation
TALC	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesi s
CALCITE	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CALCITE	Inhalation	respiratory system	Not classified	Rat	NOAEL 0.812 mg/l	90 minutes

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Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
EPOXY RESIN	Dermal	liver	Not classified	Rat	NOAEL 1,000 mg/kg/day	2 years
EPOXY RESIN	Dermal	nervous system	Not classified	Rat	NOAEL 1,000 mg/kg/day	13 weeks
EPOXY RESIN	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
TALC	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
TALC	Inhalation	pulmonary fibrosis respiratory system	Not classified	Rat	NOAEL 18 mg/m3	113 weeks
CALCITE	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
IRON OXIDE	Inhalation	pulmonary fibrosis pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
CARBON BLACK	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
IRON OXIDE (FE3O4)	Inhalation	pulmonary fibrosis pneumoconiosis	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.

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.

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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

Carcinogenicity

Respiratory or Skin Sensitization

Serious eye damage or eye 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 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 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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