



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** SCOTCHCAST BRAND ELECTRICAL INSULATING RESIN 2104 - Discontinued

**MANUFACTURER:** 3M

**DIVISION:** Electrical Markets Division

**ADDRESS:** 3M Center  
St. Paul, MN 55144-1000

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

**Issue Date:** 07/02/09

**Supersedes Date:** 08/14/01

**Document Group:** 10-2611-1

**Product Use:**

Specific Use: ELECTRICAL INSULATING RESIN

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
PART A: DITRIDECYL PHTHALATE	119-06-2	30 - 45
PART A: MDI POLYURETHANE PREPOLYMER	68442-03-5	15 - 25
PART A: POLYMETHYLENE POLYPHENYLENE ISOCYANATE	9016-87-9	15 - 25
PART A: C.I. SOLVENT YELLOW 3	97-56-3	< 0.015
PART A: P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	101-68-8	15 - 20
PART A: 1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	26447-40-5	1 - 5
PART B: POLYPROPYLENE GLYCOL GLYCEROL TRIETHER	25791-96-2	55 - 65
PART B: N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2	10 - 20
PART B: DITRIDECYL PHTHALATE	119-06-2	10 - 20
PART B: DIPROPYLENE GLYCOL	25265-71-8	5 - 10

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** PREPOLYMER: Green, viscous liquid POLYOL: Amber liquid

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** Part A (prepolymer) and the mixture of Part A with Part B (polyol) may cause an allergic skin reaction in certain susceptible individuals. May cause severe respiratory irritation. PREPOLYMER contains methylene bisphenyl diisocyanate (MDI) which is a respiratory irritant and may cause respiratory sensitization resulting in asthmatic-like symptoms. The low vapor pressure of MDI precludes significant hazard at room temperature. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

**Skin Contact:**

Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Delayed Dermal Irritation: Signs/symptoms may include localized redness, swelling, itching, and pain. These effects may not appear immediately following exposure.

**Inhalation:**

No health effects are expected.

**Ingestion:**

No health effects are expected.

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Class Description</u>	<u>Regulation</u>
PART A: C.I. SOLVENT YELLOW 3	97-56-3	Group 2B	International Agency for Research on Cancer
PART A: C.I. SOLVENT YELLOW 3	97-56-3	Anticipated human carcinogen	National Toxicology Program Carcinogens

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms persist, get medical attention.

**If Swallowed:** No need for first aid is anticipated.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	$\geq 270$ °F [Test Method: Closed Cup] [Details: MITS data]
Flammable Limits - LEL	No Data Available
Flammable Limits - UEL	No Data Available

### 5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Not applicable. Non-flammable: ordinary combustible material.

**Note:** See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Avoid contact with water. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible. Follow precautionary information. PREPOLYMER: Wear an organic vapormask. Pour decontaminant (8% conc. ammonia, 2% liquid detergent, 90% water) over spill and react 10 minutes. If these reagents are not available, use water and allow a longer reaction time. Pour adsorbent over neutralized spill. Collect and drum. Let drum sit with excess decontaminant for 24 hours before sealing. POLYOL: Pour adsorbent over spill. Collect and drum.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

Avoid contact with water to prevent potentially violent reaction or fire. Contents may be under pressure, open carefully. For industrial or professional use only. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

## 7.2 STORAGE

Keep container in well-ventilated area.

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation.

## 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

### 8.2.1 Eye/Face Protection

Avoid eye contact.

### 8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

### 8.2.3 Respiratory Protection

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface supplied-air respirator. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

### 8.2.4 Prevention of Swallowing

Not applicable.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
PART A: 1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	ACGIH	TWA	0.005 ppm	
PART A: 1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	OSHA	CEIL	0.02 ppm	Table Z-1
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
PART A: P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	ACGIH	TWA	0.005 ppm	
PART A: P,P'-METHYLENEBIS(PHENYL ISOCYANATE)	OSHA	CEIL	0.02 ppm	Table Z-1

### SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Odor, Color, Grade:**  
**General Physical Form:**  
**Autoignition temperature**  
**Flash Point**  
**Flammable Limits - LEL**  
**Flammable Limits - UEL**  
**Boiling point**

PREPOLYMER: Green, viscous liquid POLYOL: Amber liquid  
 Liquid  
*No Data Available*  
 $\geq 270^{\circ}\text{F}$  [Test Method: Closed Cup] [Details: MITS data]  
*No Data Available*  
*No Data Available*  
 $\geq 95^{\circ}\text{F}$  [Details: MITS data]

**Vapor Density**

*Not Applicable*

**Vapor Pressure**

$\leq 16$  psia [ @  $131.0000000000^{\circ}\text{F}$ ] [Details: MITS data]

**Specific Gravity**

1.05 [Details: MITS data]

**pH**

*Not Applicable*

**Melting point**

*No Data Available*

**Evaporation rate**

*Not Applicable*

**Volatile Organic Compounds**

*No Data Available*

**VOC Less H<sub>2</sub>O & Exempt Solvents**

*No Data Available*

**Viscosity**

1700 centipoise [ @  $73.4000000000^{\circ}\text{F}$ ] [Details: MITS data]

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:** Amines; Alcohols; Water; Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup. Additional Information: This refers to Part A (prepolymer).

**Hazardous Polymerization:** Hazardous polymerization will not occur.

### Hazardous Decomposition or By-Products

#### Substance

Isocyanates  
 Carbon monoxide  
 Carbon dioxide  
 Hydrogen Cyanide  
 Irritant Vapors or Gases  
 Oxides of Nitrogen  
 Toxic Vapor, Gas, Particulate

#### Condition

Not Specified  
 Not Specified  
 Not Specified  
 Not Specified  
 Not Specified  
 Not Specified  
 Not Specified

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## **SECTION 12: ECOLOGICAL INFORMATION**

### **ECOTOXICOLOGICAL INFORMATION**

Not determined.

### **CHEMICAL FATE INFORMATION**

Not determined.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** Incinerate in an industrial or commercial facility in the presence of a combustible material.  
 PREPOLYMER or POLYOL: Should be buried in a secure landfill or incinerated in accordance with local and state regulations.  
 Cured resin may be buried in a sanitary landfill in accordance with local and state regulations.

Since regulations vary, consult applicable regulations or authorities before disposal.

## **SECTION 14: TRANSPORT INFORMATION**

<b>ID Number</b>	<b>UPC</b>	<b>ID Number</b>	<b>UPC</b>
80-6107-3738-1	00-54007-50699-7	80-6107-3739-9	00-54007-50700-0
80-6112-1872-0		80-6112-1873-8	
80-6112-1874-6		80-6112-1875-3	
80-6112-1876-1			

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

## **SECTION 15: REGULATORY INFORMATION**

### **US FEDERAL REGULATIONS**

Contact 3M for more information.

### **311/312 Hazard Categories:**

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

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

<u><b>Ingredient</b></u>	<u><b>C.A.S. No</b></u>	<u><b>% by Wt</b></u>
PART A: POLYMETHYLENE POLYPHENYLENE ISOCYANATE (Diisocyanates (EPCRA 313))	9016-87-9	15 - 25
PART A: P,P'-METHYLENEBIS(PHENYL ISOCYANATE) (Diisocyanates (EPCRA 313))	101-68-8	15 - 20

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

<u><b>Ingredient (Category if applicable)</b></u>	<u><b>C.A.S. No</b></u>	<u><b>Regulation</b></u>	<u><b>Status</b></u>
PART B: DITRIDECYL PHTHALATE	119-06-2	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable
PART A: DITRIDECYL PHTHALATE	119-06-2	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

## STATE REGULATIONS

Contact 3M for more information.

## CALIFORNIA PROPOSITION 65

<u><b>Ingredient</b></u>	<u><b>C.A.S. No.</b></u>	<u><b>Classification</b></u>
PART A: C.I. SOLVENT YELLOW 3	97-56-3	**Carcinogen

\*\* WARNING: contains a chemical which can cause cancer.

## CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.

Contact 3M for more information.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

<b>This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.</b>
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**SECTION 16: OTHER INFORMATION****NFPA Hazard Classification****Health:** 2 **Flammability:** 1 **Reactivity:** 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.

No revision information is available.

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