



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** SCOTCHCAST BRAND FLAME RETARDANT COMPOUND 2130  
**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:** 10/09/2007  
**Supersedes Date:** 05/02/2001

**Document Group:** 10-2613-7

#### Product Use:

Specific Use: Electrical Insulating Resin  
 Intended Use: Resin

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
1,3-BUTADIENE, HOMOPOLYMER, HYDROXY-TERMINATED	69102-90-5	20 - 25
1,1'-METHYLENEBIS(ISOCYANATOBENZENE)	26447-40-5	25 - 35
1,2-BENZENEDICARBOXYLIC ACID, DIUNDECYL ESTER, BRANCHED AND LINEAR	85507-79-5	10 - 15
BENZENE, 1,1'-METHYLENEBIS[ISOCYANATO-, HOMOPOLYMER	39310-05-9	7 - 12
DECABROMODIPHENYL ETHER	1163-19-5	5 - 10
GLYCOLS, POLYPROPYLENE	25322-69-4	5 - 10
ANTIMONY TRIOXIDE	1309-64-4	1 - 3
N,N-DI(2-HYDROXYPROPYL)ANILINE	3077-13-2	< 2
DIPROPYLENE GLYCOL	25265-71-8	< 2
ALUMINUM POTASSIUM SODIUM SILICATE	12736-96-8	< 2
CASTOR OIL	8001-79-4	< 2
CARBON BLACK	1333-86-4	0.5 - 1
HYDROCINNAMIC ACID, 3,5-DI-TERT-BUTYL-4-HYDROXY-, OCTADECYL ESTER	2082-79-3	< 0.5

Minute quantities of the substances listed below may be emitted during Normal Use:

<u>Substance</u>	<u>Condition</u>
Isocyanates	Normal Use

## SECTION 3: HAZARDS IDENTIFICATION

### 3.1 EMERGENCY OVERVIEW

**Odor, Color, Grade:** PREPOLYMER:Hazy, amber liquid POLYOL:Black viscous liquid

**General Physical Form:** Liquid

**Immediate health, physical, and environmental hazards:** Reacts violently with water. May cause allergic skin reaction. May cause allergic respiratory reaction. Contains a chemical or chemicals which can cause cancer. May cause target organ effects.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

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

Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**

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

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

**Inhalation:**

May be harmful if inhaled.

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

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

Prolonged or repeated exposure may cause:

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

May be absorbed following inhalation and cause target organ effects.

**Ingestion:**

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**

Prolonged or repeated exposure may cause:

Cardiac Effects: Signs/symptoms may include irregular heartbeat (arrhythmia), changes in heart rate, damage to heart muscle, heart attack, and may be fatal.

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

Blood Effects: Signs/symptoms may include generalized weakness and fatigue, skin pallor, changes in blood clotting time, internal bleeding, and/or hemoglobinemia.

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

**Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

Ingredient

C.A.S. No.

Class Description

Regulation

ANTIMONY TRIOXIDE	1309-64-4	Group 2B	International Agency for Research on Cancer
CARBON BLACK	1333-86-4	Group 2B	International Agency for Research on Cancer
CARBON BLACK EXTRACTS	NONE	Group 2B	International Agency for Research on Cancer

## 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 develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Flash Point</b>	$\geq 290$ °F [ <i>Test Method:</i> Closed Cup] [ <i>Details:</i> MITS data]
<b>Flammable Limits - LEL</b>	<i>No Data Available</i>
<b>Flammable Limits - UEL</b>	<i>No Data Available</i>

### 5.2 EXTINGUISHING MEDIA

DO NOT USE WATER Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water or foam may cause frothing. See Hazardous Decomposition section for products of combustion. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Not applicable. No unusual fire or explosion hazards are anticipated.

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Accidental Release Measures:** Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Ventilate the area with fresh air. Avoid contact with water. 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. 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 MSDS. Collect the resulting residue containing solution. Place in a metal container approved for transportation by

appropriate authorities. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

**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. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid contact with water. Avoid breathing of vapors, mists or spray. Do not breathe thermal decomposition products. Avoid skin contact with hot material. Avoid eye contact with vapors, mists, or spray. For industrial use only. Not intended for use as a medical device or drug. For industrial or professional use only. Avoid contact with oxidizing agents. Do not mix with oxidizers to avoid risk of explosion. 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. Do not heat under confinement to avoid risk of explosion. Store away from areas where product may come into contact with food or pharmaceuticals. Store away from oxidizing agents. Store in a dry place.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Provide appropriate local exhaust when product is heated. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

The following eye protection(s) are recommended: Indirect Vented Goggles.

#### 8.2.2 Skin Protection

Wear appropriate gloves, such as Nomex, when handling this material to prevent thermal burns. Avoid skin contact. Avoid skin contact with hot material.

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.

Gloves made from the following material(s) are recommended: Butyl Rubber, Nitrile Rubber. The following protective clothing material(s) are recommended: Apron - Polyethylene ethylene vinyl alcohol.

#### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface pressure demand self-contained breathing apparatus. 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

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

**8.3 EXPOSURE GUIDELINES**

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
1,1'-METHYLENEBIS(ISOCYANATO)BENZENE	ACGIH	TWA	0.005 ppm	
1,1'-METHYLENEBIS(ISOCYANATO)BENZENE	OSHA	CEIL	0.02 ppm	Table Z-1
ANTIMONY COMPOUNDS	ACGIH	TWA, as Sb	0.5 mg/m3	
ANTIMONY COMPOUNDS	OSHA	TWA, as Sb	0.5 mg/m3	Table Z-1A
ANTIMONY TRIOXIDE	ACGIH	TWA, as Sb	0.5 mg/m3	
CARBON BLACK	ACGIH	TWA	3.5 mg/m3	Table A4
CARBON BLACK	CMRG	TWA	0.5 mg/m3	
CARBON BLACK	OSHA	TWA	3.5 mg/m3	Table Z-1
DECABROMODIPHENYL ETHER	AIHA	TWA	5 mg/m3	
DECABROMODIPHENYL ETHER	CMRG	TWA	5 mg/m3	
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
HYDROCINNAMIC ACID, 3,5-DI-TERT-BUTYL-4-HYDROXY-, OCTADECYL ESTER	CMRG	TWA	10 mg/m3	
POLYPROPYLENE GLYCOLS	AIHA	TWA, as aerosol	10 mg/m3	
VEGETABLE OIL MISTS	OSHA	TWA, as mist	10 mg/m3	Table Z-1A

**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**

<b>Odor, Color, Grade:</b>	PREPOLYMER:Hazy, amber liquid POLYOL:Black viscous liquid
<b>General Physical Form:</b>	Liquid
<b>Autoignition temperature</b>	No Data Available
<b>Flash Point</b>	>=290 °F [Test Method: Closed Cup] [Details: MITS data]
<b>Flammable Limits - LEL</b>	No Data Available
<b>Flammable Limits - UEL</b>	No Data Available
<b>Boiling point</b>	>=95 °F [Details: MITS data]
<b>Vapor Density</b>	Not Applicable
<b>Specific Gravity</b>	1.19 [Details: MITS data]
<b>pH</b>	Not Applicable
<b>Melting point</b>	No Data Available
<b>Evaporation rate</b>	Not Applicable
<b>Volatile Organic Compounds</b>	No Data Available
<b>VOC Less H2O &amp; Exempt Solvents</b>	No Data Available
<b>Viscosity</b>	8 - 30 centipoise [@ 73.400000000 °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.

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

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide  
Carbon dioxide  
Hydrogen Cyanide  
Oxides of Nitrogen

**Condition**

During Combustion  
During Combustion  
Oxidative Degradation  
During Combustion

**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. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

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

**SECTION 14: TRANSPORT INFORMATION****ID Number(s):**

78-8025-2873-3, 78-8025-2874-1, 78-8046-9214-9, 78-8046-9215-6, 80-6100-7694-7, 80-6100-7695-4, 80-6101-3292-2, 80-6101-3293-0, 80-6107-3082-4, 80-6107-3083-2, 80-6107-3084-0, 80-6112-0128-8, 80-6112-0147-8, 80-6112-0148-6, 80-6112-0149-4, 80-6112-0150-2, 80-6112-0151-0, 80-6112-0152-8, 80-6112-0171-8, 80-6114-3665-2

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>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
DECABROMODIPHENYL ETHER	1163-19-5	5 - 10
ANTIMONY TRIOXIDE (ANTIMONY COMPOUNDS)	1309-64-4	1 - 3

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

<u>Ingredient (Category if applicable)</u>	<u>C.A.S. No</u>	<u>Regulation</u>	<u>Status</u>
DECABROMODIPHENYL ETHER	1163-19-5	Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals	Applicable

### STATE REGULATIONS

Contact 3M for more information.

#### CALIFORNIA PROPOSITION 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
ANTIMONY TRIOXIDE	1309-64-4	**Carcinogen
CARBON BLACK	1333-86-4	**Carcinogen
CARBON BLACK EXTRACTS	NONE	**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.

WHMIS: Hazardous

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

## SECTION 16: OTHER INFORMATION

### HMIS Hazard Classification

Health: 2 Flammability: 1 Reactivity: 1 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS®) 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® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint and Coatings Association (NPCA).

No revision information is available.

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## 3M TRANSPORTATION CLASSIFICATION REPORT

DATE: 08/16/06

3M ID NUMBER: 80-6100-7694-7

PRODUCT DESC: 2130B

PROTECTIVE SERVICE DURING TRANSIT: PROTECTIVE SERVICE NOT REQUIRED

NMFC DESCRIPTION: PLASTIC LIQUID, NOI

NMFC ITEM NUMBER: 156240 SUB: 00 CLASS: 60.0

AGENCY: DOTG - DEPARTMENT OF TRANSPORTATION - GROUND (UNITED STATES)

NOT HAZARDOUS

AGENCY: DOTW - DEPARTMENT OF TRANSPORTATION - VESSEL (UNITED STATES)

NOT HAZARDOUS

AGENCY: IATA - INTERNATIONAL AIR TRANSPORT ASSOCIATION (UNITED NATIONS)

NOT HAZARDOUS

AGENCY: IMC - INTERNATIONAL MARITIME ORGANIZATION (UNITED NATIONS)

NOT HAZARDOUS

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These transportation classifications are provided as a customer service. AS THE SHIPPER YOU REMAIN RESPONSIBLE FOR COMPLYING WITH ALL THE APPLICABLE LAWS AND REGULATIONS, INCLUDING PROPER TRANSPORTATION CLASSIFICATION AND PACKAGING. 3M's transportation classifications are based on product formulation, packaging, 3M policies and 3M's understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information.

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