Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FP-301 BLACK HEAT SHRINK TUBING
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: 10/01/2008
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Product Use:
Intended Use: Electrical
Specific Use: Electrical insulation for wires/cables

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
COPOLYMER	Trade Secret	50 - 60
BISETHANE	Trade Secret	20 - 25
ANTIMONY TRIOXIDE	1309-64-4	10 - 15
AMORPHOUS SILICA	Trade Secret	1 - 5
CARBON BLACK	1333-86-4	< 2

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Black tubing, various sizes, odorless
General Physical Form: Solid
Immediate health, physical, and environmental hazards: Contact with aluminum or zinc in a pressurized system may generate hydrogen gas which could create an explosion hazard. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

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

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

Inhalation:
Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Ingestion:
No health effects are expected.

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

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. If exposed to vapors or smoke, immediately flush eyes with large amounts of water. Get immediate medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention. No need for first aid is anticipated.

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	*No Data Available*
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
OSHA Flammability Classification:	Not Applicable

5.2 EXTINGUISHING MEDIA
Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

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: Contact with aluminum or zinc in a pressurized system may generate hydrogen gas which could create an explosion hazard.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Not applicable.

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 skin contact with hot material. 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. Do not ingest. For industrial or professional use only.

7.2 STORAGE
Store away from heat.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Provide appropriate local exhaust when product is heated.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Avoid eye contact with vapors or smoke resulting from overheating or when used in confined areas.

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

8.2.3 Respiratory Protection
Avoid breathing of fumes.
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

Ingredient	Authority	Type	Limit	Additional Information
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	
ANTIMONY TRIOXIDE	CMRG	TWA, as Sb	0.2 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
STEARATES	ACGIH	TWA, as total dust	10 mg/m3	Table A4

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:	Black tubing, various sizes, odorless
General Physical Form:	Solid
Autoignition temperature	*No Data Available*
Flash Point	*No Data Available*
Flammable Limits - LEL	*No Data Available*
Flammable Limits - UEL	*No Data Available*
Boiling point	*No Data Available*
Density	*No Data Available*
Vapor Density	*Not Applicable*
Vapor Density	*Not Applicable*
Vapor Pressure	*Not Applicable*
Vapor Pressure	*Not Applicable*
Specific Gravity	*No Data Available*
pH	*Not Applicable*
Melting point	*No Data Available*
Solubility In Water	*Not Applicable*
Solubility in Water	*Not Applicable*
Evaporation rate	*Not Applicable*
Volatile Organic Compounds	*Not Applicable*
Percent volatile	*Not Applicable*
VOC Less H2O & Exempt Solvents	*Not Applicable*
Viscosity	*Not Applicable*

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Reactive metals; High shear and high temperature conditions
Avoid overheating to decomposition during application, irritating or toxic fumes may result.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Aldehydes	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Bromide	During Combustion
Oxides of Antimony	During Combustion
Toxic Vapor, Gas, Particulate	During Combustion
Oxides of Zinc	During Combustion

Hazardous Decomposition: Heating product beyond temperature recommended by instruction sheet may cause release of the following compounds: Benzene, Toluene, Formaldehyde, Acetaldehyde, and Hydrogen Bromide.

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 applicable.

CHEMICAL FATE INFORMATION

Not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste product in a sanitary landfill. As a disposal alternative, incinerate in an industrial or commercial facility.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
78-8126-6258-9, 78-8126-6259-7, 78-8126-6260-5, 78-8126-6261-3, 80-6102-1904-2, 80-6102-1934-9, 80-6102-1940-6, 80-6102-

1946-3, 80-6102-1953-9, 80-6102-2030-5, 80-6102-2034-7, 80-6102-2038-8, 80-6102-2726-8, 80-6102-2729-2, 80-6102-2733-4, 80-6102-2736-7, 80-6102-2759-9, 80-6102-2760-7, 80-6102-2761-5, 80-6102-2763-1, 80-6102-2878-7, 80-6102-2906-6, 80-6102-2909-0, 80-6102-3429-8, 80-6102-3452-0, 80-6102-3522-0, 80-6102-3545-1, 80-6102-3836-4, 80-6102-3884-4, 80-6102-5193-8, 80-6102-5194-6, 80-6102-5195-3, 80-6102-5196-1, 80-6105-4585-9, 80-6106-4519-6, 80-6106-4520-4, 80-6106-4521-2, 80-6106-4643-4, 80-6106-4769-7, 80-6106-4817-4, 80-6106-7531-8, 80-6106-7568-0, 80-6106-7808-0, 80-6106-9072-1, 80-6106-9328-7, 80-6106-9332-9, 80-6106-9333-7, 80-6107-5113-5, 80-6107-5214-1, 80-6107-5220-8, 80-6107-5226-5, 80-6107-5232-3, 80-6107-5313-1, 80-6107-5452-7, 80-6107-6663-8, 80-6107-6743-8, 80-6107-6760-2, 80-6107-6766-9, 80-6107-6933-5, 80-6107-6934-3, 80-6107-8420-1, 80-6107-8429-2, 80-6107-8477-1, 80-6107-8574-5, 80-6107-8581-0, 80-6107-8588-5, 80-6107-8595-0, 80-6107-8671-9, 80-6107-8678-4, 80-6107-8685-9, 80-6107-8692-5, 80-6107-8741-0, 80-6107-8743-6, 80-6107-8744-4, 80-6107-8745-1, 80-6108-1904-9, 80-6108-1930-4, 80-6108-2081-5, 80-6108-2229-0, 80-6108-5415-2, 80-6108-5417-8, 80-6108-5419-4, 80-6108-5421-0, 80-6109-0693-7, 80-6109-5700-5, 80-6109-5788-0, 80-6109-5975-3, 80-6109-5976-1, 80-6109-5977-9, 80-6110-0131-6, 80-6110-0281-9, 80-6110-7166-5, 80-6110-7249-9, 80-6110-7250-7, 80-6110-7338-0, 80-6110-7483-4, 80-6110-7820-7, 80-6110-7838-9, 80-6110-7840-5, 80-6110-7843-9, 80-6110-7844-7, 80-6110-7854-6, 80-6110-7896-7, 80-6112-6398-1, 80-6112-6838-6, 80-6114-1910-4, 80-6114-1999-7, 80-6114-2629-9, 80-6114-2699-2, 80-6114-2732-1, 80-6114-2746-1, 80-6114-3137-2, 80-6114-3138-0, 80-6114-3147-1, 80-6114-3703-1, A0-6107-6749-5

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 - No Immediate Hazard - Yes Delayed Hazard - No

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

Ingredient	C.A.S. No	% by Wt
ANTIMONY TRIOXIDE (ANTIMONY COMPOUNDS)	1309-64-4	10 - 15

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
ANTIMONY TRIOXIDE	1309-64-4	**Carcinogen
CARBON BLACK	1333-86-4	**Carcinogen

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

CHEMICAL INVENTORIES

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

Contact 3M for more information.

Additional Information: See Section 4 for Hazardous Decomposition Products.

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

NFPA Hazard Classification

Health: 1 **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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