FEDERAL MOGUL

# MATERIAL SAFETY DATA SHEET

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Expando PT Plus (Black)

**Manufacturer:**
Federal Mogul Corporation
26555 Northwestern Highway
Southfield, MI 48033

**24hr Emergency Phone (Infotrac): 1-800-535-5053**
**International: 001-352-323-3500**
**Non-Emergency Phone: 248-354-9844**

## SECTION 2: COMPOSITION/INFORMATION ON HAZARDOUS INGREDIENTS

Expando PT Plus (Black) sleeving is a tough, lightweight product used to oversleeve and protect cable assemblies, hoses and wire harnesses. Made of braided polyester monofilaments, Expando PT Plus (Black) increases cut-through strength and abrasion resistance of electrical and thermal insulating surfaces. It is specially treated to eliminate end fray.

Although several of the ingredients used to formulate this product may be hazardous in the raw state, the manufacturing process results in a solid, infusible form, binding and otherwise, rendering the product inert. The constituents identified below may be present in quantities greater than 1% (0.1% for carcinogens) and may be released from the product by overheating, burning, machining, abrasion, or riveting.

This information provides the minimum criteria for safe usage and handling of this product. Companies using this product should develop their own occupational health program to protect employees from injury or adverse health effects.

| Ingredient | CAS No. | % Weight | OSHA PEL | ACGIH TLV |
|---|---|---|---|---|
| Polyester Monofilament | None Established | >90 | None Established | None Established |
| Acrylamide | 79-06-1 | <1 | 0.3 $mg/m^3$ | 0.03 $mg/m^3$ |
| Acrylonitrile | 107-13-1 | <1 | 2 ppm | 2 ppm |
| Ethyl acrylate | 140-88-5 | <1 | 25 ppm | 5 ppm |
| Formaldehyde | 50-00-0 | <1 | 0.75 ppm | 0.3 ppm (A2) (C) |

A2: Categorized by ACGIH as Suspected Human Carcinogen; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals as with relevance to humans
C: Ceiling Limit

## SECTION 3: HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Shipped material is not considered hazardous, but operations (e.g., overheating, burning, machining, abrading, or riveting) that can create airborne dust should be avoided.

### POTENTIAL HEALTH EFFECTS

**Inhalation:** Dust from abnormal abrasion or vapors from heating >149°C can cause irritation.

**Skin**: Molten material can cause thermal burns.

**Eye:** Dust particles may cause irritation or corneal injury due to mechanical action.

**Ingestion:** Not a probable route of entry.

## POTENTIAL HEALTH EFFECTS (continued)

**Carcinogenicity:**

| COMPONENT<br>NTP<br>IARC<br>OSHA |
|---|
| Polyester Monofilament |
| No<br>No<br>No |
| Acrylamide |
| No<br>Yes (2A)<br>No |
| Acrylonitrile |
| Yes<br>Yes (2B)<br>Yes |
| Ethyl Acrylate |
| Yes<br>Yes (2B)<br>No |
| Formaldehyde |
| Yes<br>Yes (2A)<br>Yes |

## Symptoms and Effects of Exposure to Selected Individual Components

**ACRYLAMIDE**
Toxic by ingestion, skin contact, intravenous, intraperitoneal, and other exposure routes. Intoxication has caused peripheral neuropathy, erythemia and peeling of the palms. It can be absorbed through intact skin.

**ACRYLONITRILE**
**Acute –** May cause somnolence, general anesthesia, cyanosis and diarrhea. Symptoms include flushing of the face, salivation, irritation of eyes and nose, nausea, deepened respiration, weakness and headache.
**Chronic** – IARC classifies this component as “probably carcinogenic to humans”.”
**Other** – human systemic irritant, may be toxic by skin and ingestion exposure routes. Target organs include liver brain, kidneys and cardiovascular system.

**ETHYL ACRYLATE**
Toxic by ingestion and inhalation. Moderately toxic by skin contact and intraperitoneal routes. Human systemic effects by inhalation include eye, olfactory and pulmonary changes.

**FORMALDEHYDE**
**Acute –** Gastrointestinal toxicity may occur if ingested; may cause nausea, vomiting and severe abdominal pain. Exposure to the skin may cause irritation and contact dermatitis at moderately low levels. Inhalation may cause irritation of the upper respiratory tract, a burning sensation of the nose and throat, sneezing, coughing, headache, difficulty breathing, nausea, vomiting and excessive thirst. May cause conjunctivitis, eye irritation/redness/burning and excessive tearing.
**Chronic** – Sensitizing of respiratory tract and development of an asthmatic reaction to further exposure. Sensitization and allergic skin reaction. Can aggravate asthma and inflammatory or fibrotic pulmonary disease.

## SECTION 4: FIRST AID MEASURES

**Inhalation:** Move to fresh air. Seek medical attention.

**Eye Contact:** Flush with water to remove particle.

**Skin Contact:** Wash thoroughly with soap and water. If molten material falls on skin, do not attempt to remove material; cool immediately with water.

**Ingestion:** Obtain medical help.

## SECTION 5: FIRE FIGHTING MEASURES

This product is inherently flame resistant, but may ignite at temperatures exceeding 600°C in an oxygen-enriched atmosphere.

**Flashpoint:** N/A **LEL:** N/A **UEL:** N/A **Autoignition Temperature:** N/A

**Extinguishing Media:** Use media suitable for surrounding fire.

**Unusual Fire and Explosion Hazards:** None

**Special Fire-Fighting Procedure:** Wear self-contained breathing apparatus when extinguishing. Hazardous decomposition products are generated in fire conditions.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Scrap monofilament may present a slipping hazard. Sweep up and dispose of according to all federal and state disposal procedures. If dust is generated during machining, abrading or riveting, remove the dust by vacuuming or wet-mopping. Vacuums should be equipped with HEPA filters. Do not use compressed air to blow dust from surfaces.

## SECTION 7: HANDLING AND STORAGE

Do not heat to greater than 149°C for prolonged periods of time. Avoid breathing fumes at elevated temperatures. If dust is generated while shipping product, remove dust by vacuuming/wet-mopping. Vacuums used for this purpose should be equipped with HEPA filters. Do not use compressed air to blow dust from surfaces.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ventilation Protection:** Any operation which may produce dust, including machining, grinding, riveting, or abrading this product, should be adequately exhausted to prevent inhalation of dust.

**Respiratory Protection:** Use a NIOSH-approved respirator if there is a potential for exposure to exceed potential PELs or TLVs. (See 29 CFR 1910.134, OSHA Respiratory Protection Standard.)

**Skin Protection:** If skin irritation occurs, gloves and other protective garments may be worn. Wear gloves when winding or unwinding this product.

**Eyes:** Wear safety glasses or goggles, as necessary, if dust exposure is possible.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|---|---|---|---|
| **Boiling Point:** | N/A | **Vapor Pressure:** | N/A |
| **Melting Point:** | 250°C | **Vapor Density (air = 1):** | N/A |
| **pH:** | N/A | **% Volatile:** | N/A |
| **Specific Gravity:** | 1.22-1.38 g/cc | **Evaporation Rate:** | N/A |
| **Water Solubility:** | Insoluble | **Form, Color and Odor:** | Solid, black and odorless |

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable at normal temperatures and storage conditions.

**Incompatibility (Materials/Conditions to Avoid):** Strong bases

**Hazardous Polymerization:** Will not polymerize

**Decomposition Products:** Thermal decomposition will occur at temperatures greater than 149°C producing such by-products as carbon monoxide, carbon dioxide, esters, alcohols, acids, hydrogen cyanide, oxides of nitrogen, acetaldehyde, and trace amounts of aromatic and aliphatic hydrocarbons.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Inhalation:** Refer to Section 3

**Skin**: Refer to Section 3

**Eye:** Refer to Section 3

**Ingestion:** Refer to Section 3

**Acute:** None known

**Chronic:** None known

## SECTION 12: ECOLOGICAL INFORMATION

N/A

## SECTION 13: DISPOSAL CONSIDERATIONS

Federal and state law regulates disposal of scrap material or dust as solid waste; disposal must be in accordance with federal and state laws. Contact local regulatory agencies for guidance.

## SECTION 14: TRANSPORTATION INFORMATION

| | |
|---|---|
| **Proper Shipping Name:** | Not regulated |
| **Hazard Class:** | None |
| **Identification Number:** | None |
| **Packing Group:** | N/A |
| **Shipping Label:** | None |
| **Additional Marking Requirement:** | None |

## SECTION 15: REGULATORY INFORMATION

**U.S. TSCA:** All chemicals used in the manufacture of this product are listed on the U.S. Toxic Substances Control Act (TSCA) Inventory

**California Proposition 65:** This product contains ingredients known to the State of California to cause cancer, birth defects or other reproductive effects.

**SARA Title III – Section 313 Supplier Notification:** This product contains the following chemicals subject to SARA Title III/CERCLA "reportable quantities" (RQs) and/or "threshold planning quantities" (TPQs) and/or are classified as "Toxic Chemicals" under the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR 372:

| Ingredient | CAS Number |
|---|---|
| Acrylamide | 76-06-1 |
| Acrylonitrile | 107-13-1 |
| Ethyl acrylate | 140-88-5 |
| Formaldehyde | 50-00-0 |

**RCRA Hazardous Waste Code:** Not Available

**CERCLA Hazardous Substances:** Not Available

**OSHA:** Not Available

**WHMIS Classification:** Not Available

## SECTION 16: OTHER INFORMATION

Abbreviations:

| | |
|---|---|
| CAS No.: | Chemical Abstract Services Number |
| OSHA PEL: | U.S. Occupational Safety and Health Administration Permissible Exposure Limit |
| ACGIH TLV: | American Conference of Governmental Industrial Hygienists Threshold Limit Value (2004) |
| N/A: | Not Applicable |
| $mg/m^3$ | Milligrams per cubic meter |
| ppm: | Parts per million |
| IARC: | International Agency for Research on Cancer |
| NTP: | National Toxicology Program |
| NIOSH: | National institute of Occupational Safety and Health |
| HEPA: | High-efficiency particulate air |

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