

MATERIAL SAFETY DATA SHEET

UNION CARBIDE CORPORATION
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DANBURY, CONNECTICUT 06810

REVISED DATE: November 18 1988

POD MSDS 121-3

IMPORTANT: Union Carbide Corporation urges each customer or recipient of this Material Safety Data Sheet to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology or fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe use and handling of this product, each customer or recipient should (1) notify its employees, agents, contractors, and others whom it knows or believes will use this material of the information on this MSDS and any other information regarding hazards or safety, (2) furnish this same information to each of its customers for the product, and (3) request its customers to notify their employees, customers, and other users of the product of this information.

* I. IDENTIFICATION *

PRODUCT GROUP: Natural Pelleted Halogen-Based Flame-Retardant Peroxide
Cross-Linkable Polyethylene Compounds

BASE RESIN: Polyethylene Homopolymer CAS NO: 9002-88-4

* II. PHYSICAL DATA *

MELT INDEX: Not applicable

DENSITY: 1.0 - 1.4

PERCENT VOLATILES BY VOLUME: NIL

APPEARANCE AND ODOR: 1/8 inch diameter off-white pellets; mild
characteristic odor.

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* III. INGREDIENTS *

HAZARDOUS COMPONENTS:

<u>MATERIALS</u>	<u>HAZARD</u>	<u>EXPOSURE LIMITS</u>
Antimony oxide CAS NO: 1309-64-4	Hazardous dust; eye, skin, and respiratory tract irritant	0.5 mg/m3 as Sb (OSHA/ACGIH)
Dibasic Lead Phthalate CAS NO: 69011-06-9	Animal Teratogen	0.05 mg/m3, (OSHA) 0.15 mg/m3 (ACGIH) as Pb
di[2-tertiary-butyl- peroxy-iso-propyl]benzene CAS NO: 25155-25-3	Eye and skin irritant	None established
65% Dibasic Lead Stearate in EP Rubber CAS NO: 7428480	Animal Teratogen	0.05 mg/m3, (OSHA) 0.15 mg/m3 (ACGIH) as Pb
Zinc 2-mercaptotoluimidazole CAS NO: 61617-00-3	Nuisance Particulate	10mg/m3 (ACGIH) 5mg/m3 respirable 15mg/m3 total (OSHA)
Silicon Dioxide CAS NO. 61617-00-3	Nuisance Particulate	10mg/m3 (ACGIH)

This group of products also contains a halogen-based flame-retardant.
(See Section X for Additional Information)

* IV. FIRE AND EXPLOSION HAZARD DATA *

AUTOIGNITION TEMPERATURE: Generally 600-740 Deg. F depending on individual
product composition.

EXTINGUISHING MEDIA: Use water spray, carbon dioxide, dry chemical,
alcohol-type or universal-type foams applied by
manufacturer's recommended technique.

SPECIAL FIRE-FIGHTING PROCEDURES: Hydrogen bromide and other toxic gases may
be liberated at elevated temperatures
(above 400 Deg. C), such as might occur in
case of fire exposure. Use NIOSH-approved
self-contained breathing apparatus for
fire-fighting.

(FIRE AND EXPLOSION HAZARD DATA continued on next page)

SPECIAL FIRE AND EXPLOSION HAZARDS: Avoid accumulation and dispersion of dust to reduce explosion potential (see Section IX).

* V. HEALTH HAZARD DATA *

EXPOSURE LIMITS: There are no established exposure limits for polyethylene, however, Union Carbide treats polyethylene dust as a nuisance particulate. OSHA limits exposure to 15 mg/m³ total dust and 5 mg/m³ respirable dust (29 CFR 1910.1000 Table Z-3). ACGIH limits are 10 mg/m³ total dust.

ACUTE EFFECTS OF OVEREXPOSURE: None currently known.

HEALTH HAZARDS: Avoid breathing dust or any fumes that may be generated during processing.

The peroxide cross-linking agent contained in this compound decomposes when heated. As a result, small amounts of pyrolytic products may be emitted during processing. These decomposition products may irritate skin, eyes, and nasal passages (see Section VIII). Avoid exposure to dust and fumes. Avoid skin contact.

Antimony oxide is a respirable dust and may cause injury to the respiratory tract if inhaled in excessive concentrations. Antimony oxide is also capable of causing serious injury to the eyes and skin. Zinc 2-mercaptotoluimidazole and silicon dioxide are nuisance particulates.

A single overexposure of Lead Phthalate or Dibasic Lead Stearate may cause abdominal pain, vomiting, nausea, diarrhea, thirst, and malaise. Repeated overexposure may result in headache, nausea, abdominal cramps, salivation, vomiting, dizziness, weakness, insomnia, diarrhea, loss of appetite, restlessness, irritability, wrist-drop, foot-drop, convulsions, and coma. Anemia, kidney injury, and neurological (central and peripheral) effects also are notable with chronic lead poisoning. Lead compounds have been shown to cause birth defects in laboratory animals.

The antimony oxide and lead and zinc compounds are compounded into the polymer matrix and thus are not expected to present the same hazards that exists in the neat state.

(HEALTH HAZARD DATA continued on next page)

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MEDICAL CONDITIONS

AGGRAVATED BY OVEREXPOSURE: A knowledge of the available toxicology information and of the physical and chemical properties of this material suggests that overexposure is unlikely to aggravate existing medical conditions.

**SIGNIFICANT LABORATORY DATA
WITH POSSIBLE RELEVANCE TO
HUMAN HEALTH HAZARD**

EVALUATION: Long term repeated inhalation exposure to antimony oxide has been shown to cause malignant tumors in the lungs of laboratory rats.

EMERGENCY AND FIRST AID PROCEDURES: If inhaled, remove to fresh air.

(See Section X for Additional Information)

* **VI. REACTIVITY DATA** *

STABILITY: Stable

CONDITIONS TO AVOID: Temperatures over 150 Deg. C. may cause premature resin cross linking.

INCOMPATIBILITY (MATERIALS TO AVOID): None

DECOMPOSITION PRODUCTS: Thermal decomposition may include carbon monoxide, carbon dioxide, aldehydes, other organic vapors, and hydrogen bromide (above 400 Deg. C), and lead and antimony compounds.

REACTIVE OR EXPLOSIVE POLYMERIZATION: Will not occur.

* **VII. SPILLS OR LEAKS** *

CLEANUP PROCEDURES: Sweep up and collect in suitable container for disposal.

CAUTION: Polyethylene pellets on floors are slippery and can cause falls.

WASTE DISPOSAL METHOD: When disposed of this product is not considered a RCRA hazardous waste. Dispose of in accordance with local, state and federal regulations.

* VIII. SPECIAL PROTECTION INFORMATION *

RESPIRATORY PROTECTION: Use NIOSH-approved respirator if unable to control airborne dust, fumes, and vapors.

VENTILATION: Local exhaust ventilation is recommended for control of airborne dust, fumes, and vapors.

* IX. SPECIAL PRECAUTIONS *

STORING AND HANDLING PRECAUTIONS:

WARNING: AIRBORNE DUST PARTICLES MAY FORM EXPLOSIVE DUST-AIR MIXTURE.
DUST AND PROCESS FUMES MAY BE HARMFUL IF INHALED.
HARMFUL IF SWALLOWED.
CONTAINS LEAD WHICH CAUSES BIRTH DEFECTS IN LABORATORY ANIMALS.

Prevent accumulation of dust particles.
Maintain proper grounding at all times.
Avoid breathing dust and process fumes.
Use with adequate ventiation.
Do not take internally.
Wash thoroughly after handling.

OTHER PRECAUTIONS:

The fines and dust particles contained in all polyethylene resins are defined as Class I Dust (lowest explosive level) under National Fire Protection Association (NFPA)-68. Your facilities and procedures must conform to NFPA-654. Prevent accumulation of dust particles; operate to ensure no system leaks develop; and maintain proper equipment grounding at all times. Read and understand Union Carbide's "Polyethylene Handling and Storage Guide".

* X. REGULATORY INFORMATION *

Federal: Toxic Substances Control Act: All the components of this product are on the TSCA inventory.

SARA Sections 311/312
"Hazardous Chemicals"
40 CFR Part 370

Hazard Categories: Immediate and Delayed Health Hazards

SARA Section 313
"Toxic Chemicals"
40 CFR Part 372

Contains the following chemicals, subject to the reporting requirements of Section 313 SARA:

CHEMICAL	UPPER BOUND CONCENTRATION
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Zinc 2-mercaptotoluimidazole	5%
Dibasic Lead Phthalate	5%
Antimony Oxide	10%

STATE: The following additional information is supplied in compliance with the Right to Know Laws.

California This product contains trace amounts of arsenic. The state of California has found arsenic to cause cancer.

Pennsylvania This product is subject to the Pennsylvania Right to Know Law. It contains a nonhazardous component whose identity is trade secret.

Massachusetts This product contains trace amounts of arsenic, a Massachusetts "extraordinarily hazardous substance".

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* EMERGENCY PHONE NUMBER *
* 1-800-UCC-HELP *
* THIS NUMBER IS AVAILABLE DAYS, NIGHTS, WEEKENDS AND HOLIDAYS *

The opinions expressed herein are those of qualified experts within Union Carbide Corporation. We believe that the information contained herein is current as of the date of the Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of Union Carbide Corporation, it is the user's obligation to determine the conditions of safe use of the product.

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