

Product Safety Summary



PAXON™ HIGH DENSITY POLYETHYLENE

This Product Safety Summary document is a high-level summary intended to provide the general public with an overview of product safety information on this chemical substance. It is not intended to provide emergency response, medical or treatment information, or to provide an in-depth discussion of all safety and health information. This document is not intended to replace the Material Safety Data Sheet.

1. Chemical Identity

PAXON™ HIGH DENSITY POLYETHYLENE (HDPE) RESINS are characterized as a high molecular weight homopolymer or copolymer plastic material. The major components are ethylene and hexene (C₂ and C₆ olefins) that have been catalytically polymerized.

| | | <u>Other Names:</u> |
|--------------------|--------------------|--|
| CAS No. 9002-88-4 | PAXON™ HDPE RESINS | PETROLEUM HYDROCARBON RESINS (Homopolymer) |
| CAS No. 25213-02-9 | PAXON™ HDPE RESINS | (Copolymer) |

2. Product Uses

PAXON™ HDPE RESINS are a white to off-white solid. These resins are either in pellet, granule or powder form. Main attributes of these resins in their final applications are superior stress crack resistance, high impact strength, and good rigidity.

Paxon™ HDPE RESINS are used for blow molded or extruded applications. These include:

- Liquid food containers
- Automotive fuel tanks
- Large volume drums
- Vessels
- Tanks
- Pails

3. Physical / Chemical Properties

PAXON™ HDPE RESINS are solid polymers that are stable and non-hazardous. If heated to excessive temperatures, they may burn or decompose to flammable hydrocarbons (fire situations). Safety hazards of these products at ambient temperature are generally negligible, due to their high molecular weight, minimal toxicity and general inertness. Under OSHA and EU regulations these products are not considered as hazardous with regard to physical hazards. The melting point for PAXON™ HDPE RESINS is estimated to be 248°F (120°C) -284°F (140 °C).

4. Health Information

Health hazards of PAXON™ HDPE RESINS, at ambient temperature are generally negligible, due to their high molecular weight, minimal toxicity and general inertness. They are not toxic or highly toxic, primary irritants, corrosive, sensitizers, reproductive toxins, carcinogenic, and do not cause target organ effects.

Health hazards also may be presented by the additives or impurities (e.g., unreacted monomers, solvent residues, reaction by-products). The identity and amount of the potential PAXON™ HDPE RESIN product impurities have been evaluated. At the low levels in these products they do not present a health hazard. Although some of the additives may possess health hazards in bulk, when present in the polymer product the hazards are so greatly reduced that the polymers containing them would not be classified as hazardous. This is

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due to the low levels contained in the polymer (i.e., much less than 1%) and the fact that the additives are encapsulated in the polymer.

Based on these evaluations, under OSHA and EU regulations these products are considered non-hazardous with regard to health effects. They are also considered non-hazardous by the U. S. Department of Transportation (DOT).

5. Environmental Information

The information given for PAXON™ HDPE RESINS is based on data available for the material, the components of the material, and similar materials. These resins biodegrade at a slow rate and may persist in the environment. They are not expected to cause short-term toxicity to fish or other aquatic or terrestrial organisms. Because of its low solubility in water, chronic aquatic toxicity is not expected.

6. Exposure Potential

Based on the processing conditions and uses of PAXON™ HDPE RESINS, the public could be exposed through particulate dust from the product.

- **Workplace exposure** – This refers to potential exposure in a manufacturing facility or through various industrial applications. Generally, exposure of personnel to PAXON™ HDPE RESINS in manufacturing facilities is relatively low due to the predominantly enclosed nature of the process, storage and handling operations. Exposure can also occur from inhalation to particulate dusts in the packaging material. The Occupational Safety and Health Administration (OSHA) exposure limits for nuisance dust are 5 mg/m³ (respirable dust) and 15 mg/m³ (total dust). The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) are 10 mg/m³ for inhalable particulates (total dust) and 3 mg/m³ for respirable particulates (total dust) for Particulates Not Otherwise Classified (PNOC).
- **Consumer use of products containing PAXON™ HDPE RESINS** – This category of exposure is highly variable depending on the product being used and the conditions under which it is used. Exposure of the majority of consumers to commercial PAXON™ HDPE RESINS sources is likely to be infrequent and of short duration. The best way to prevent exposure is to work in well-ventilated areas, wearing chemical resistant gloves. Good personal hygiene practices should always be followed.
- **Environmental releases** – Chemical manufacturers are committed to operating in an environmentally responsible manner everywhere we do business. Our efforts are guided by in-depth scientific understanding of the environmental impact of our operations, as well as by the social and economic needs of the communities in which we operate. Industrial spills or releases are rare; however a spill may pose a significant flammability issue. Our operational improvement targets and plans are based on driving incidents with real environmental impact to zero and delivering superior environmental performance.

7. Manufacture of Product

- **Capacity** – ExxonMobil Chemical reports U.S. production nameplate capacity for these polymers in excess of 2 billion pounds.
- **Process** – PAXON™ HDPE RESINS are produced by catalytic polymerization of olefins.

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8. Risk Management

When processing PAXON™ HDPE RESINS, ensure that adequate ventilation is provided so that exposure limits are not exceeded. SPECIAL PRECAUTIONS: Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures (for example, oxygenated components). When handling hot molten material, wear heat resistant gloves to protect your hands and skin. Wash hands and skin following contact. If PAXON™ HDPE RESIN dust gets into your eyes, rinse eyes thoroughly for at least 15 minutes with tap water. Additional risk management guidelines can be located in the appropriate material safety data sheet (MSDS).

9. Regulatory Information

PAXON™ HDPE RESINS are considered a non-hazardous product. Regulatory information concerning the transportation, use and/or disposal of this material can be found by consulting the relevant Material Safety Data Sheet.

10. Conclusion Statements

- PAXON™ HDPE RESINS are a widely used polymer.
- PAXON™ HDPE RESINS are considered a non-hazardous product.
- PAXON™ HDPE RESINS do not cause adverse health or environmental effects at levels typically found in the workplace or environment.
- PAXON™ HDPE RESINS are non-flammable but can burn; use with good ventilation.

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