Product Safety Assessment

ICOPOR Pigment Paste


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Names
• ICOPOR I-105 (P) Black Pigment Paste

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Product Overview
• ICOPOR I-105 pigment paste is a water-insoluble dispersion of carbon-black pigment in diisobutyl phthalate. It is formulated as a black, creamy paste with a bland odor.¹² For further details, see Product Description.
• ICOPOR pigment paste is used to color materials used to manufacture artificial leathers and textile products.³ For further details, see Product Uses.
• Exposure to this product can occur either in facilities that manufacture ICOPOR pigment paste or in the various industrial or manufacturing facilities that use this product. Dow does not sell this product for direct consumer use, but it is used to color artificial leathers and textile products with which consumers may come into contact.⁴ For further details, see Exposure Potential.
• Direct eye or skin contact with this product may cause slight to moderate irritation. Inhalation of this product may cause headache and respiratory effects. Some studies have reported adverse effects on reproduction in laboratory animals exposed to high doses of diisobutyl phthalate. Carbon black has been shown to be carcinogenic to laboratory animals.⁵,⁶,⁷,⁸ For further details, see Health Information.
• The dye component used in ICOPOR pigment paste, carbon black, is expected to degrade slowly in the environment, has a low potential to bioconcentrate, and is anticipated to be practically nontoxic to aquatic organisms on an acute basis. The diisobutyl phthalate component in this product is readily biodegradable, has a moderate potential for bioconcentration, and is highly toxic to aquatic organisms.⁹,¹⁰,¹¹ For further details, see Environmental Information.
• ICOPOR pigment paste is considered stable under recommended storage and normal use conditions.¹² For further details, see Physical Hazard Information.

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Manufacture of Product

- **Location** – Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company, and its global affiliates manufacture acrylic and polyurethane emulsions and dispersions and related products in various global locations.
- **Process** – ICOPOR pigment paste is produced using proprietary chemistries, processes, and blending techniques.

Product Description

ICOPOR pigment paste is a dispersion of carbon-black pigment in diisobutyl phthalate. The carbon black typically makes up 25 to 40 percent of the dispersion. This product is formulated as a black, creamy paste with a bland odor. It is not water soluble, but it is soluble in many organic solvents and oils.

Product Uses

ICOPOR pigment paste is used to color high-solids or solvent-free polyurethane resins and polyvinyl chloride (PVC) plastisols used to make artificial leathers and textile products.

Exposure Potential

ICOPOR pigment paste is used in the formulation of a variety of industrial and consumer products. Based on the uses for this product, individuals could be exposed through:

- **Workplace exposure** – Exposure can occur either in facilities that manufacture or formulate ICOPOR pigment paste or in the various industrial facilities that use this product. Those working with this product in manufacturing operations could be exposed during maintenance, sampling, testing, or other procedures. Each manufacturing facility should have a thorough training program for employees and appropriate work processes, ventilation, and safety equipment in place to limit exposure. See Health Information.
- **Consumer exposure to products containing ICOPOR pigment paste** – Dow does not sell this product for direct consumer use, but it is used to color artificial leathers and textile products with which consumers may come into contact. Once introduced to the artificial leather or textiles, the color is dried and bound to the materials and is not considered to be an exposure risk. See Health Information.
- **Environmental releases** – Engineering controls in facilities that manufacture or formulate ICOPOR pigment paste should be designed to limit environmental exposure. In the event of a spill, the focus is on containing the spill to prevent contamination of soil, surface water, or groundwater. For small spills, these products should be absorbed with inert materials such as sand. Respiratory protection is necessary for cleaning up spills and leaks. If released to the environment, the dye component is expected to bind to soils, suspended solids, and sediments. The diisobutyl phthalate component in ICOPOR pigment paste has low volatility. If released to water, it will tend to bind to soils, suspended solids, and sediments. Since the compound is readily biodegradable, it is expected to be removed in soil and water environments, including biological wastewater treatment facilities. See Environmental, Health, and Physical Hazard Information.
- **Large release** – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, the product should be captured, collected, and reprocessed or disposed of according to applicable governmental regulations. An approved respirator is recommended for emergency work. See Environmental, Health, and Physical Hazard Information.
- **In case of fire** – Unnecessary entry into the area must be denied and the use of unmanned hose holders should be considered. Water spray or fog, carbon-dioxide or dry-chemical extinguishers, or foam should be used to fight the fire. Use of a direct water stream may spread the fire. The phthalate component of this product is combustible. Irritating and highly toxic gases and fumes may be generated during combustion or decomposition. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing. Fire water should be kept out of waterways and sewers to minimize the potential for environmental damage. Emergency procedures should be carefully followed. See Environmental, Health, and Physical Hazard Information.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.
Health Information

Eye contact – Direct contact with this product may cause slight to moderate irritation.

Skin contact – Direct contact with this product may cause slight to moderate irritation.

Inhalation – Inhalation of this product may cause irritation of the nose, throat, and lungs, and result in cough, phlegm, tiredness, chest pain, and headache.

Ingestion – This product has low toxicity if swallowed. Swallowing small amounts incidental to handling is not likely to cause injury; however, swallowing larger amounts may cause injury.

Repeated exposure – In laboratory animals, prolonged or repeated exposure to diisobutyl phthalate was shown to cause adverse developmental effects on the fetus at doses that were toxic to the mother. Carbon black has been shown to be carcinogenic to laboratory animals.

Other – Some studies have reported adverse effects on reproduction in laboratory animals exposed to high doses of diisobutyl phthalate.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.

Environmental Information

The dye component used in ICOPOR pigment paste, carbon black, is insoluble in water and has low volatility. If released to water, it is expected to float on the water or bind to soils, suspended solids, or sediments. Carbon black is expected to degrade slowly in the environment due to chemical and biological processes. This component has a low potential to bioconcentrate (accumulate in the food chain) and is expected to be practically nontoxic (LC50/EC50 >100 mg/L) to aquatic organisms on an acute basis.

The diisobutyl phthalate component in ICOPOR pigment paste has low volatility. If released to water, it will tend to bind to soils, suspended solids, and sediments. Since the compound is readily biodegradable, it is expected to be removed in soil and water environments, including biological wastewater treatment facilities. It shows a moderate potential for bioconcentration and is highly toxic to aquatic organisms (LC50/EC50 between 0.1 and 1.0 mg/L for the most sensitive species) on an acute basis.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.

Physical Hazard Information

ICOPOR pigment paste is considered stable under recommended storage and normal use conditions.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.

Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use, and/or disposal of ICOPOR pigment paste. These regulations may vary by city, state, country, or geographic region. Information may be found by consulting the relevant Safety Data Sheet or Contact Us.

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Additional Information

- Request the relevant Safety Data Sheet from the Dow Customer Information Group (www.dow.com/assistance/dowcig.htm).
- Contact Us (www.dow.com/assistance/index.htm).

For more business information about ICOPOR pigment paste, contact the Dow Customer Information Group at www.dow.com/assistance/dowcig.htm.

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