Product Safety Assessment

GREENPUR™ Azo-based Color Pastes


Select a Topic:
Names
Product Overview
Manufacture of Product
Product Description
Product Uses
Exposure Potential
Health Information
Environmental Information
Physical Hazard Information
Regulatory Information
Additional Information
References

Names
- GREENPUR™ 3019 Giallo Color Paste
- GREENPUR 3059 Giallo Color Paste
- GREENPUR 3080 Rosso Color Paste
- GREENPUR 3309 Giallo Color Paste
- GREENPUR 0346 Rosso Color Paste

Product Overview
- GREENPUR™ Azo-based Color Pastes are solvent-based pastes containing organic and inorganic pigments. The pigments are based on compounds containing one or more –N=N– group.\(^1\)\(^2\) For further details, see Product Description.
- GREENPUR Azo-based Color Pastes are generally used to color resins used in textile coatings and artificial leather production.\(^3\) For further details, see Product Uses.
- Exposure can occur either in facilities that manufacture GREENPUR Azo-based Color Pastes or in the various industrial or manufacturing facilities that use these products. Dow does not sell these products for direct consumer use, but they are used in small amounts to color a variety of textiles and artificial leathers to which individuals could be exposed.\(^4\) For further details, see Exposure Potential.
- Direct eye and skin contact may cause slight irritation. Inhalation of vapor or mist from solvent and dust from other ingredients may cause irritation of the nose, throat, and lungs and excessive exposure may cause dizziness or drowsiness. These products have low toxicity if swallowed.\(^5\)\(^6\) For further details, see Health Information and request the relevant Safety Data Sheet from the Dow Customer Information Group.
- The solvent in GREENPUR Azo-based Color Pastes is readily biodegradable, has a low potential to accumulate in the food chain (bioconcentration potential is low), and is practically nontoxic to aquatic organisms on an acute basis. The main dye components are expected to slowly degrade through chemical and biological processes, have a low to moderate potential to accumulate in the food chain, and are expected to be moderately to highly toxic to aquatic organisms.\(^7\) For further details, see Environmental Information.
- GREENPUR Azo-based Color Pastes are considered stable under recommended storage and normal use conditions. Avoid contact with strong oxidizers.\(^8\) For further details, see Physical Hazard Information.

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Page 1 of 6
Product Safety Assessment: GREENPUR™ Azo-based Color Pastes

Manufacture of Product
- **Location** – GREENPUR™ products are formulated by approved contract manufacturers to meet stringent Dow specifications for quality and performance. The materials are produced in locations and quantities necessary to meet market demand.
- **Process** – GREENPUR Azo-based Color Pastes are produced using proprietary chemistries, processes, and blending techniques.

Product Description
GREENPUR™ Azo-based Color Pastes are solvent-based pastes containing organic and inorganic dyes dispersed in dipropylene glycol monomethyl ether. Azo pigments are based on compounds containing one or more –N=N– group. These products include the pigments indicated below:

- GREENPUR 3019 Giallo Color Paste Pigment Yellow 13
- GREENPUR 3059 Giallo Color Paste Pigment Yellow 83
- GREENPUR 3080 Rosso Color Paste Pigment Red 208
- GREENPUR 3309 Giallo Color Paste Titanium dioxide (CAS No. 13463-67-7) (Pigment White 6)
- GREENPUR 0346 Rosso Color Paste Pigment Red 208 and Pigment Violet 19

Product Uses
GREENPUR™ Azo-based Color Pastes are generally used to color solvent-based polyurethane and vinyl-acrylic resins used for textile coatings and artificial leather production. These products are also used to color high-solids, two-component polyurethanes.

Exposure Potential
GREENPUR™ Azo-based Color Pastes are used in the production of industrial and consumer products. Based on the uses for these products, individuals could be exposed through:
- **Workplace exposure** – Exposure can occur either in facilities that manufacture GREENPUR Azo-based Color Pastes or in the various industrial or manufacturing facilities that use these products. These products are produced, distributed, stored, and consumed in closed systems. Those working with GREENPUR Azo-based Color Pastes 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 prevent exposure. See Health Information.
- **Consumer exposure to products containing GREENPUR Azo-based Color Pastes** – Dow does not sell these products for direct consumer use, but they are used in small amounts to color a variety of textiles and artificial leathers to which individuals could be exposed. Exposure to the final products is not considered to present a risk. See Health Information.
- **Environmental releases** – Engineering controls in facilities that manufacture or formulate GREENPUR Azo-based Color Pastes are 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. If released to the environment, the dyes are expected to bind to soils, suspended solids, and sediments and would be expected to be removed in wastewater-treatment facilities by adsorption to biosolids, while the solvent will biodegrade rapidly in soil or 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 requirements. Appropriate protective equipment must be worn when handling a spill of this material. Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Eliminate all ignition sources and evacuate personnel to safe areas. Ventilate the area. Floor may be slippery; use care to avoid falling. Soak up material with inert, organic material such as sand, silica gel, acid binder, universal binder, or sawdust. Sweep up or vacuum up spillage, and collect in suitable container for disposal. Avoid breathing vapor. Spills on porous surfaces can contaminate groundwater. See Environmental, Health, and Physical Hazard Information.
- **In case of fire** – Deny any unnecessary entry into the area and consider the use of unmanned hose holders. Use water spray, carbon-dioxide or dry-chemical extinguishers, or foam to fight the fire. Vapors may travel to a source of ignition and flash back. Closed containers may rupture via pressure buildup when exposed to fire or extreme heat. During a fire, irritating or highly toxic gaseous decomposition products may be formed.
gases and/or fumes may be generated during combustion or decomposition. Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind and avoid breathing smoke. Firefighters should wear self-contained breathing apparatus (SCBA). See Environmental, Health, and Physical Hazard Information.

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

Health Information

Health information for GREENPUR™ Azo-based Color Pastes is summarized on the relevant Safety Data Sheets. An overview of health information for GREENPUR Azo-based Color Pastes appears below. It is important to note that health hazards associated with individual products may vary based on their formulation or intended use. These materials may also contain minor components or additives that have additional health hazards which are at levels that are not a risk to consumers. The Safety Data Sheet is the preferred source for specific health information.

Eye contact – Direct contact with the solvent is essentially nonirritating to the eyes. Exposure to titanium dioxide in some products may be irritating to the eyes.

Skin contact – Direct contact with the solvent is essentially nonirritating to skin.

Inhalation – Inhalation of vapor or mist from the solvent in these products may cause minor irritation of the nose, throat, and lungs, and excessive exposure may cause dizziness or drowsiness. Exposure to titanium dioxide and alumina in some products, if inhaled in the form of dust, may cause respiratory tract irritation or inflammation.

Ingestion – These products have 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 – Excessive inhalation of vapor or mist from the solvent in these products may cause anaesthetic effects like dizziness or drowsiness.

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

Environmental Information

Environmental information for GREENPUR™ Azo-based Color Pastes is summarized on the relevant Safety Data Sheets. These materials may also contain solvents or additives that have additional environmental impact. An overview of environmental information for GREENPUR Azo-based Color Pastes appears below. However, it is important to note that environmental impact associated with individual products may vary based on their formulation or intended use. The Safety Data Sheet is the preferred source for specific environmental information.

Dye components used in GREENPUR Azo-based Color Pastes have low volatility. If released to water, dye components are expected to bind to soils, suspended solids, or sediments. Most dye components are expected to degrade slowly in the environment in response to chemical and biological processes, including removal by wastewater-treatment facilities by adsorption to biosolids. These components have a low-to-moderate potential to bioconcentrate (accumulate in the food chain) and are expected to be moderately to highly toxic to aquatic organisms on an acute basis (LC₅₀/EC₅₀ values between 0.1 and 10 mg/L in the most sensitive species tested).

The solvent used in GREENPUR™ Azo-based Color Pastes, dipropylene glycol monomethyl ether, has low volatility and is miscible with water. If released to the environment, the compound will have a tendency to remain in water with minimal tendency to bind to soil or sediment.

The solvent is unlikely to persist in the environment. The solvent is readily biodegradable, which suggests that it will likely be removed in biological wastewater treatment facilities as well as other water and soil environments.

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The solvent is not likely to accumulate in the food chain (bioconcentration potential is low) and is practically nontoxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in the most sensitive species tested).

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

Physical Hazard Information
GREENPUR™ Azo-based Color Pastes are considered stable under recommended storage and normal use conditions. Avoid contact with strong oxidizers.

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 GREENPUR™ Azo-based Color Pastes. 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.

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


References

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Back to top
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