Product Safety Assessment

DOW™ Redispersible Polymer Powders

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Names

- DOW™ Redispersible Polymer Powder
- DOW Latex Powder (DLP)
- DLP 210 redispersible polymer powder
- DLP 211 redispersible polymer powder
- DLP 212 redispersible polymer powder
- DLP 2000 redispersible polymer powder
- DLP 2001 redispersible polymer powder
- DLP 2020 redispersible polymer powder
- DLP 2050 redispersible polymer powder
- DLP 2101 redispersible polymer powder
- DLP 2140 redispersible polymer powder
- DLP 2141 redispersible polymer powder
- DLP 402 redispersible polymer powder

Product Overview

- DOW™ redispersible polymer powders are copolymers that are based on vinyl acetate/ethylene, or other chemistries. They offer key advantages of a free-flowing powder additive, like ease of transportation, storage and handling. For further details, see Product Description.
- DOW redispersible polymer powders are sold for industrial use in construction applications as an additive to cement, mortar, grout, and related materials. These products improve adhesive strength, workability and open time, flexural strength and durability, and abrasion resistance. For further details, see Product Uses.
- Dow does not sell DLP products for direct consumer use, but they are used in the manufacture of some consumer products. For further details on exposure potential, see Exposure Potential.
- These products are essentially nonirritating to the skin. However, if used without proper protective equipment, contact with the solid or dust may cause irritation or corneal injury due to the mechanical action, such as scratching the eyes. For further details, see Health Information.
- Although the redispersible polymer powders are essentially non-biodegradable, they are expected to slowly degrade in the environment, including degradation by physical action or by exposure to sunlight. For further details, see Environmental Information.
- DOW redispersible polymer powders are stable under normal, applicable use conditions. For further details, see Physical Hazard Information.

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Manufacture of Product

- **Location** – The Dow Chemical Company produces redispersible polymer powders in Knoxville, Tennessee, U.S.A. Foreign affiliates of Dow manufacture these products at facilities in Schkopau, Germany.
- **Process** – DOW™ redispersible polymer powders are produced by spray drying polymer dispersions produced by emulsion polymerization using proprietary raw materials and processes.

Product Description

DOW™ redispersible polymer powders are copolymers that are sold for industrial use as white, free-flowing powders. DOW redispersible polymer powders are based on the following copolymer chemistries:
- Vinyl acetate-ethylene
- Vinyl acetate/ethylene/vinyl ester of versatic acid
- Styrene/butadiene

Product Uses

DOW™ redispersible polymer powders are used in construction applications as an additive to dry mix mortars and related materials. These products improve wet mortar properties, like workability and open time, and dry mortar properties, like adhesive, flexural and compressive strengths, durability, and abrasion resistance of the final products. Specific applications include:
- Masonry mortar and repair mortar
- Decorative render
- Tile grout
- Cement-based tile adhesives
- Self-leveling compounds
- Exterior insulation finishing systems (EIFS) adhesive, base coat, and skim coat

Exposure Potential

Dow neither sells DOW™ redispersible polymer powders directly to consumers, nor is this product used directly by consumers. However, these powder products are used as a component in many industrial and consumer products. Based on the uses for these products, individuals could be exposed through:

- **Workplace exposure** – Workplace exposure can occur either in facilities that manufacture DOW redispersible polymer powders or in the various industrial facilities, which manufacture products that use DOW redispersible polymer powders. Those working with these products in manufacturing operations could be exposed during maintenance, sampling, testing, or other procedures. Dow has extensive training programs for employees and appropriate work processes and safety equipment in place each to limit exposure. If the exposure occurs in any facility other than the Dow facility, employee should check with the operator of such facility for the training program, work processes and safety equipment which are put in place to limit such exposure. See [Health Information](#).

- **Consumer exposure to products containing DOW redispersible polymer powders** – DOW redispersible polymer powders are not sold directly to consumers. However, consumers may purchase finished products that contain these additives from distributors, which would cause them to use such finished products without any professional supervision.
Always read and follow product label instructions and any other directions provided by the finished product manufacturer before use. See Health Information.

- **Environmental releases** – Due to the use pattern for these redispersible polymer powders, releases to the environment are expected to be minimal. If released, the redispersible polymer powders will tend to float in water and will be removed in wastewater treatment facilities by adsorption to biosolids sludge. In the event of a spill, the focus is on immediate clean-up to prevent contamination of soil and surface or ground water. See Environmental, Health, and Physical Hazard Information.

- **Large releases** – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, the material should be captured, collected, and reprocessed or disposed of according to applicable governmental requirements.

- **In case of fire** – Isolate the fire and deny any unnecessary entry into the area. Use water spray or fog, carbon-dioxide or dry-chemical extinguishers, or foam to fight the fire. Avoid creating airborne dusts, which could represent an explosion hazard. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing. These products are combustible and produce dense smoke. Exposure to temperatures well above normal processing temperatures can cause these polymers to decompose. Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: aldehydes, alcohols or organic acids. Follow emergency procedures carefully. See Environmental, Health, and Physical Hazard Information.

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

**Health Information**

Health information for DOW™ redispersible polymer powders is summarized on the relevant Safety Data Sheets. It is important to note that health risks associated with individual products may vary based on their formulation or intended use. The Safety Data Sheet is the preferred source for specific health information. These products may also contain minor components or additives that have additional health risks. An overview of health information for DOW redispersible polymer powders appears below.

- **Eye contact** – Contact with solid or dust may cause irritation or corneal injury due to mechanical action (scratching the eyes).

- **Skin contact** – Contact is essentially nonirritating. Prolonged or repeated exposure is unlikely to result in absorption of harmful amounts.

- **Inhalation** – A single exposure to dust is not likely to cause adverse effects. Prolonged exposure may irritate the nose, throat, and lungs.

- **Ingestion** – These products have a low toxicity if swallowed. Harmful effects are not anticipated from swallowing small amounts; however, swallowing larger amounts may cause injury.

- **Repeated exposure** – Repeated excessive exposure may aggravate pre-existing lung disease.

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

Although DOW™ redispersible polymer powders are essentially non-biodegradable, they are expected to slowly degrade in the environment, including degradation by physical action or by exposure to sunlight.

DOW redispersible polymer powders are not water soluble. If released into the water environment, the redispersible polymer powders will float and will ultimately bind with soil, suspended particles or sediment.

The redispersible polymer powders are not expected to accumulate in the food chain due to their high molecular weight, and they are not expected to be toxic to fish and other aquatic organisms. (LC₅₀/EC₅₀ >100 mg/L for the most sensitive species).

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

Physical Hazard Information

DOW™ redispersible polymer powders are stable under applicable normal use conditions. The dust from these materials, when suspended in air, can represent an explosion hazard. Do not permit dust to accumulate, avoid generating air-borne dust, and minimize sources of ignition. To reduce the potential for dust explosions, electrically bond and ground equipment.

Avoid contact with acids, and strong oxidizers.

Spilled polymer powder may result in slippery conditions.

For more information, request the 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 DOW™ redispersible polymer powders. These regulations may vary by city, state, country, or geographic region. Information may be found by consulting the relevant Safety Data Sheet, Technical Data Sheet, or Contact Us.

Additional Information

- Request the Safety Data Sheet from the Dow Customer Information Group (www.dow.com/assistance/dowcig.htm)
- Contact Us (www.dowconstructionchemicals.com/na/en/contact/)
- Technical Data Sheets (www.dowconstructionchemicals.com/na/en/products/)

For more business information about DOW™ redispersible polymer powders, visit the Dow Construction Chemicals website at www.dowconstructionchemicals.com.

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