Product Safety Assessment

DOW™ Floor Care Polymers


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Names
- DURAGREEN™ Series Floor Care Polymers
- PRIMAL™ Series Floor Care Polymers
- PRIMAL™ NT Series Floor Care Polymers
- DURAPLUS™ Series Floor Care Polymers
- DURAPLUS ADVANTAGE™ Series Floor Care Polymers
- UHS PLUS™ Series Floor Care Polymers
- RHOPLEX™ Series Floor Care Polymers

Product Overview
- DOW™ Floor Care Polymers are acrylic or acrylic-blend polymer emulsions. These products are milky, white liquids with ammonia or acrylic-like odors and can be diluted with water. For further details, see Product Description.
- DOW Floor Care Polymers are used in floor finishes and sealers for industrial, institutional, commercial, and household applications. These products are incorporated into floor-care products to offer a clear, glossy protective wear layer or base coat that helps enhance the appearance of the flooring. For further details, see Product Uses.
- DOW Floor Care Polymers are used in the production of industrial and consumer products. Workplace exposure can occur either in facilities that manufacture DOW Floor Care Polymers or in the various industrial or manufacturing facilities that use these products. Dow does not sell DOW Floor Care Polymers for direct consumer use. Contact with dried polymer emulsion is not considered to present a risk to consumers. For further details, see Exposure Potential.
- Eye contact with these products may cause slight irritation. Prolonged or repeated skin contact may cause slight irritation. Inhalation of vapor or mist may cause irritation of the nose, throat, and lungs, as well as headache and nausea. For further details, see Health Information or request the relevant Safety Data Sheet from the Dow Customer Information Group.
- Acrylic resins in Dow Floor Care Polymers are expected to degrade slowly in the environment. Due to their high molecular weight, acrylic resins are not likely to accumulate in the food chain, and they are not expected to be toxic to fish or other aquatic organisms. For further details, see Environmental Information.
- These products are considered stable under recommended storage and normal use conditions. For further details, see Physical Hazard Information.

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Manufacture of Product

- **Locations** – The Dow Chemical Company and its global affiliates manufacture DOW™ Floor Care Polymers at various global facilities.
- **Process** – DOW Floor Care Polymers are produced using proprietary chemistries, processes, and formulating techniques.

Product Description

DOW™ Floor Care Polymers are water-based acrylic or acrylic blend polymer emulsions with nominally 40% solids by weight.

DURAGREEN™ and PRIMAL™ NT Series Floor Finish Polymers are zinc-free, acrylic or styrene-acrylic polymer emulsions. The emulsions may contain small amounts (<0.1 percent) of residual monomers and aqua ammonia (CAS No. 1336-21-6). These products are milky-white liquids with an ammonia odor and can be diluted with water if necessary.

DURAPLUS™, UHS PLUS™, RHOPLEX™, and PRIMAL™ Series Floor Finish Polymers are generally metal-crosslinked, modified acrylic polymer emulsions containing small amounts of zinc compounds or mixed metals, in addition to the residual monomers and aqua ammonia. These products are milky-white liquids with an ammonia odor and can be diluted with water if necessary.

RHOPLEX and PRIMAL Series Floor Sealers are generally non-removable and metal-free, modified acrylic polymer emulsions. These products are milky-white liquids with an ammonia odor and can be diluted with water if necessary.

DURAPLUS C Wood Finish Polymer is a milky-white acrylic-silicone hybrid polymer emulsion with an ammonia odor.

RHOPLEX and PRIMAL Series Floor Resins are acrylic, alkali-soluble polymer emulsions. These products are milky-white liquids with an acrylic-like odor and can be diluted with water if necessary.

Product Uses

DOW™ Floor Care Polymers include a range of emulsions formulated into floor finishes and sealers for industrial, institutional, commercial, and household applications. These products offer a clear, glossy protective wear layer that helps enhance the appearance of the flooring. In floor sealers, these products offer a high adhesion, low maintenance, durable, protective base coat applied directly over the flooring.

DOW Floor Care Polymers are used in the following applications:

- **DURAGREEN™, PRIMAL™, PRIMAL™ NT, DURAPLUS™, UHS PLUS™, and RHOPLEX™ Series Floor Finish Polymers** – floor polish on resilient vinyl composition flooring and nonresilient tile (quarry tile, unsealed ceramic tile terrazzo, marble, slate, paver) for use in schools, retail and grocery stores, nursing homes, offices, and hospitals
- **RHOPLEX and PRIMAL Series Floor Sealers** – floor sealer (base coat) on resilient vinyl composition flooring and nonresilient tile (quarry tile, unsealed ceramic tile terrazzo, marble, slate, paver, and concrete) for use in commercial and institutional buildings
- **DURAPLUS C Wood Finish Polymer** – clear wood finish for athletic surfaces such as racquetball courts and gymnasiums
- **RHOPLEX and PRIMAL Series Floor Resins** – low color resin adds leveling, high gloss, and high wear to floor polishes in a variety of applications

Exposure Potential

DOW™ Floor Care Polymers are used in the production 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 DOW Floor Care Polymers or in the various industrial or manufacturing facilities that use these products. They are produced, distributed, and stored in closed systems. Those working with DOW Floor Care Polymers in manufacturing operations could be exposed during maintenance, sampling, testing, application, 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.

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• **Consumer exposure to products containing DOW™ Floor Care Polymers** – Dow does not sell DOW Floor Care Polymers for direct consumer use, but they are incorporated into floor finishes and sealers. Contact with the dried polymer emulsion is not considered to present a risk to consumers. Always read and follow product label instructions before use. See Health Information.

• **Environmental releases** – In the event of a spill, the focus is on containing the spill to prevent contamination of soil, surface water, or groundwater. Respiratory protection is necessary for cleaning up spills and leaks. For small spills, DOW Floor Care Polymers should be absorbed with materials such as sand. If released, the acrylic resins will tend to float in water and will be removed in biological wastewater-treatment facilities by adsorption to biosolids. 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. Use personal protective equipment. Keep people away from and upwind of the spill or leak. Spilled product can create slippery conditions. Keep spills and cleaning runoff out of municipal sewers and open bodies of water. Contain spills immediately with inert materials (sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. See Environmental, Health, and Physical Hazard Information.

• **In case of fire** – These products are not combustible until evaporated to dryness. The dried residue can burn. Products can splatter above 100°C (212°F). Use extinguishing media that is appropriate for the surrounding fire. Thermal decomposition may yield acrylic monomers. Firefighters should wear self-contained breathing apparatus and protective suits. See Environmental, Health, and Physical Hazard Information.

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

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**Health Information**

Health information for DOW™ Floor Care Polymers is summarized on the relevant Safety Data Sheets. These products may also contain minor components or additives that have additional health risks. 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. An overview of health information for DOW Floor Care Polymers appears below.

**Eye contact** – Direct contact may cause slight eye irritation.

**Skin contact** – Prolonged or repeated contact may cause slight skin irritation. Repeated contact with some products may result in skin allergy.

**Inhalation** – Inhalation of vapor or mist may cause irritation of the nose, throat, and lungs, as well as headache and nausea.

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

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**Environmental Information**

Environmental information for DOW™ Floor Care Polymers is summarized on the relevant Safety Data Sheets. These products may also contain solvents or additives that have additional environmental impact. It is important to note that the 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. An overview of environmental information for DOW Floor Care Polymers appears below.

The acrylic resin components of DOW Floor Care Polymers are insoluble in water and nonvolatile. If introduced to the aqueous environment, they will disperse and eventually bind to soil, suspended particles, or sediment. Although the acrylic resins do not biodegrade, they are expected to slowly degrade in the environment, including degradation by physical action or exposure to sunlight. The acrylic resins would likely be removed in biological wastewater treatment facilities by adsorption to biosolids. Due to their high molecular weight, acrylic resins are not expected to accumulate in the food chain (bioconcentration potential is low), and they are not expected to be toxic to fish and other aquatic organisms.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.
Physical Hazard Information
These products are considered stable under recommended storage and normal use conditions. There are no known materials that are incompatible with these products. DOW™ Floor Care Polymers will not undergo polymerization.

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 DOW™ Floor Care Polymers. 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 Sheet from the Dow Customer Information Group (www.dow.com/assistance/dowcig.htm)
- Visit the DCIS Floor Care webpage to access technical literature; http://dcis.dow.com/
- Contact Us (www.dow.com/assistance/dowcig.htm)
- DURAPLUS™ 3, Technical Data Sheet, Rohm and Haas Company (http://www.dow.com/products/)
- For more business information about DOW™ Floor Care Polymers, visit the Dow Customer Information Group at www.dow.com/assistance/dowcig.htm.

References
1. DURAGREEN™ MF-1 Emulsion Material Safety Data Sheet, The Dow Chemical Company
2. PRIMAL™ E-3479 Emulsion Material Safety Data Sheet, The Dow Chemical Company
3. PRIMAL™ CS-4000 Emulsion Material Safety Data Sheet, The Dow Chemical Company
4. DURAPLUS™ C-3668 Emulsion Material Safety Data Sheet, The Dow Chemical Company
5. RHOPLEX™ E-1531C Emulsion Material Safety Data Sheet, The Dow Chemical Company
6. Floor Care Polymers: The Right Combination, The Right Chemistry, Rohm and Haas Company, Paint and Coatings Materials Europe
NOTICES

As part of its 2015 Sustainability Goals, Dow has committed to make publicly available safety assessments for its products globally. This product safety assessment is intended to give general information about the chemical (or categories of chemicals) addressed. It is not intended to provide an in-depth discussion of health and safety information. Additional information is available through the relevant Safety Data Sheet, which should be consulted before use of the chemical. This product safety assessment does not replace required communication documents such as the Safety Data Sheet.

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