Product Safety Assessment

Unbound Dullers


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Names
- Unbound Dullers
- DULL #1A Emulsion
- PRIMAL™ DULL HE-6 Emulsion

Product Overview
- Unbound dullers are water-based, silica-gel emulsions formulated as white or nearly white liquids with an ammonia odor. For further details, see Product Description.
- Unbound dullers are used in leather-finishing topcoats to add a dull finish to footwear, automotive interiors, furniture, and apparel. For further details, see Product Uses.
- These products are for commercial use. Worker exposure is possible during manufacture, transport, or application. Consumers may purchase finished leather goods manufactured with these dullers. For further details, see Exposure Potential.
- Eye contact with components in these products may cause slight irritation. Skin contact may cause irritation, drying, or flaking of the skin. Repeated excessive inhalation of dusts of amorphous silica, the main component in this product, may cause respiratory and reversible lung effects. For further details, see Health Information.
- The amorphous silica components of unbound dullers are considered chemically and biologically inert; however, they would be expected to persist in the environment. If released to water, they would disperse and eventually settle into sediments. They would be removed in wastewater-treatment facilities as biosolids. The components of these products are not likely to accumulate in the food chain and are not harmful to aquatic organisms at normal concentrations. For further details, see Environmental Information.
- Unbound dullers are noncombustible unless they are completely dried. They are stable under recommended storage and use conditions. For further details, see Physical Hazard Information.
Manufacture of Product
• **Location** – Rohm and Haas Company, a wholly owned subsidiary of The Dow Chemical Company, and its global affiliates manufacture unbound dullers at facilities in North America.
• **Process** – Unbound dullers are produced in batch operations using proprietary methods, chemistries, and formulations.

Product Description
PRIMAL™ DULL HE-6 emulsion and DULL #1A emulsion are commercial leather-finishing products. These products are water-based silica-gel emulsions formulated as white or nearly white liquids with an ammonia odor. Unbound dullers are formulated to contain small amounts (<0.2%) of aqua ammonia (CAS No. 1336-21-6). PRIMAL DULL HE-6 emulsion may also contain microcrystalline paraffin or hydrocarbon waxes, and DULL #1A emulsion may also contain acrylic polymers and traces of residual monomers.

Product Uses
Unbound dullers are used in leather-finishing topcoats to dull the finish without affecting clarity and color. Leathers produced with topcoats containing these water-based silica emulsions are used in the following applications:
• Footwear
• Automotive interiors
• Furniture
• Apparel and accessories

Unbound dullers are designed to help extend the pot life and provide heat stability in aqueous and other topcoats for leather by helping to improve application properties, aesthetics, leveling, gloss, opacity, face, fill, and smoothness.

Exposure Potential
Unbound dullers are used in the leather-finishing industry. Based on this use, individuals could be exposed through:
• **Workplace exposure** – Exposure can occur either in facilities that manufacture unbound dullers or in the various industrial or manufacturing facilities that use these products. These products are produced, transported, and stored in closed containers until time for use. Those working with unbound dullers 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 unbound dullers** – Dow does not sell unbound dullers for direct consumer use. However, leather goods used by consumers may incorporate these products. Contact with the dried product as used on finished goods is not considered to present a risk to consumers. See Health Information.
• **Environmental releases** – Due to the use patterns for these products, releases to the environment are likely to be minimal. In the event of a spill, the focus is on immediate containment to help prevent contamination of soil, surface water, or groundwater. Small spills should be absorbed with inert materials such as sand or soil. The components are inert and would not be expected to persist in the environment. If released to water, they would settle into sediments and would be removed in wastewater-treatment facilities as biosolids. These products are not likely to accumulate in the food chain and are not harmful to aquatic organisms at normal concentrations.  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. Keep people away and upwind of the spill. Respiratory protection may be necessary for cleaning up spills and leaks if exposure limits are exceeded. Spilled material can create slippery conditions. See Environmental, Health, and Physical Hazard Information.
• **In case of fire** – Deny any unnecessary entry into the area. Unbound dullers are not combustible until the water has evaporated to dryness. Use extinguishment techniques suitable for the surrounding materials to fight the fire. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing. Keep fire water out of waterways and

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Created: April 28, 2013

The Dow Chemical Company

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sewers to help minimize the potential for environmental damage. Material can splatter above 100°C (212°F). Follow emergency procedures carefully. 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 unbound dullers 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 unbound dullers appears below:

Eye contact – Eye contact with components in these products may cause slight irritation.

Skin contact – These products may cause drying and flaking of the skin. Some components in these products may cause skin irritation due to mechanical abrasion.

Inhalation – Repeated excessive inhalation of dusts of amorphous silica, the main component in this product, may cause respiratory and reversible lung effects. Aqua ammonia, a minor component of unbound dullers, has established inhalation guidelines.

Ingestion – These products are expected to have low toxicity if swallowed and are not likely to cause injury. Ingestion is not considered to be a likely source of exposure.

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

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Environmental Information

The polymeric components in unbound dullers are inert. They are expected to persist in the environment. If released to water, they would settle into sediments and would be removed in wastewater-treatment facilities as biosolids. These products are not likely to accumulate in the food chain and are not harmful to aquatic organisms at normal concentrations.

Aqua ammonia, a minor component of unbound dullers, poses a low risk to the environment.

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

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Physical Hazard Information

Unbound dullers are stable under recommended storage and use conditions. Freezing may affect stability. The product will not undergo polymerization.

Unbound dullers are noncombustible unless the water has evaporated to dryness.

There are no known materials that are incompatible with this product.

For more information, request the relevant Safety Data Sheet from the Dow Customer Information Group.
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Regulatory Information
Regulations may exist that govern the manufacture, sale, transportation, use, and/or disposal of unbound dullers. 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 Safety Data Sheet from the Dow Customer Information Group (www.dow.com/assistance/dowcig.htm)
- Contact Us (www.dow.com/assistance/dowcig.htm)

For more business information about unbound dullers, visit the Dow PRIMAL™ for Leather webpage at www.dow.com/products/product-line/primal-for-leather/.

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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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