Product Safety Assessment

**UCON™ Coating Fluids**


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Names
- UCON™ Coating Fluid LB-550-XY26
- UCON Coating Fluid LB-1145-Y24

**Product Overview**

- UCON™ coating fluids are specially formulated polyalkylene glycols. They are colorless to yellow or brown liquids. They are slightly soluble in water and formulated in a variety of molecular weights and viscosity ranges.\(^1\) For further details, see Product Description.
- UCON coating fluids are used as lubricating and preservative coatings for hydraulic brake parts and similar equipment.\(^2\) For further details, see Product Uses.
- Dow does not sell UCON coating fluids for direct consumer use, so consumer exposure is unlikely. Exposure can occur either in a facility that manufactures or formulates UCON coating fluids, or in the various industrial or manufacturing facilities that use them. For further details, see Exposure Potential.
- Eye contact may cause slight, temporary eye irritation. Brief skin contact may cause slight irritation with local redness. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Skin contact with a minor component may cause an allergic reaction. Exposure to vapor is minimal due to low volatility. A single inhalation exposure is not likely to be hazardous. Very low toxicity is expected if the product is swallowed.\(^3\) For further details, see Health Information.
- The major components of UCON coating fluids, polypropylene glycol monobutyl ethers, range from inherently to readily biodegradable, and are not expected to accumulate in the food chain (low bioconcentration potential). The acute aquatic toxicity varies with molecular weight of the main components.\(^4\) For further details, see Environmental Information.
- UCON coating fluids are stable at typical use temperatures. Exposure to elevated temperatures can cause these products to decompose, generating gas and the potential for pressure build-up in closed systems.\(^4\) For further details, see Physical Hazard Information.

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Manufacture of Product
- **Location** – Dow produces UCON™ fluids in Freeport, Texas and South Charleston, West Virginia, USA.
- **Process** – UCON base stocks are formulated with specific additives to produce UCON coating fluids in batch operations using proprietary Dow materials and technology.

Product Description
UCON™ coating fluids are polypropylene glycol-based formulations with rust and oxidation inhibitors. They are colorless to yellow or brown liquids. These products are insoluble in water. UCON coating fluids are noncorrosive to iron, steel, brass, bronze, and aluminum under normal operating conditions. Inhibitors can be incorporated to control corrosive moisture conditions.

Product Uses
UCON™ coating fluids are used as lubricating and preservative coatings for hydraulic brake parts and similar equipment. They are applied to brake parts to provide corrosion protection prior to assembly. They have no adverse effect on braking system elastomers and provide lubrication during brake assembly.

Exposure Potential
UCON™ coating fluids are used in the production of industrial products. Based on the uses for these products, the public could be exposed through:
- **Workplace exposure** – Exposure can occur either in facilities that manufacture or formulate UCON coating fluids, or in the various industrial or manufacturing facilities that use them. They are produced, distributed, stored, and consumed in closed systems. Those working with these products 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 UCON coating fluids** – Dow does not sell UCON coating fluids for direct consumer use, so consumer exposure is unlikely. See Health Information.
- **Environmental releases** – In the event of a spill, the focus is on containing the spill to prevent contamination of soil and surface or ground water. For small spills, the product should be absorbed with materials such as sand. These products have low volatility and low solubility in water. If released to water, the product would float and could be removed by skimming devices. The major components are biodegradable and would be removed in 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. 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 to fight the fire from a distance. Use water spray or fog, carbon-dioxide or dry-chemical extinguishers, or foam to fight the fire. Alcohol-resistant foam is preferred. Use of a direct water stream may spread the fire. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing.
Immediately withdraw all personnel from the area in case of rising sounds from venting safety device or discolorations of the container. Follow emergency procedures carefully. See Environmental, Health, and Physical Hazard Information.

For more information, see the relevant Safety Data Sheet.

Health Information

Health information for UCON™ coating fluids 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 contain minor components or additives that have additional health risks. An overview of health information for UCON coating fluids appears below.

**Eye contact** – Contact may cause slight, temporary eye irritation.

**Skin contact** – Brief contact may cause slight irritation with local redness. Prolonged contact is unlikely to result in absorption of harmful amounts. Contact with a minor component has caused allergic skin reactions in humans.

**Inhalation** – At room temperature, exposure to vapor is minimal due to low volatility. A single inhalation exposure is not likely to be hazardous.

**Ingestion** – Very low toxicity if swallowed. Harmful effects are not anticipated from swallowing small amounts.

**Repeated exposure** - Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

For more information, see the relevant Safety Data Sheet.

Environmental Information

Environmental information for UCON™ coating fluids is summarized on the relevant Safety Data Sheets. These products may contain minor components or additives that have additional environmental risks. The Safety Data Sheet is the preferred source for specific environmental information. An overview of environmental information for the major component of UCON coating fluids appears below.

UCON coating fluids have low vapor pressure and low solubility in water. Product released to water or soil would tend to remain there and not volatilize (evaporate) to the air. If released to water, the products would float and could be removed by skimming equipment.

The major component of UCON coating fluids, polypropylene glycol monobutyl ether, is unlikely to persist in the environment. UCON coating fluids range from inherently to readily biodegradable which suggests they will be removed from water and soil environments, including biological wastewater treatment plants.

Because of the high molecular weight of these products, bioconcentration (accumulation in the food chain) would not be expected. The acute toxicity of these substances to fish and other
aquatic organisms spans from slightly toxic to moderately toxic. In general, toxicity decreases with increased molecular weight.²

For more information, see the relevant Safety Data Sheet.

**Physical Hazard Information², 3, 4**

UCON™ coating fluids are stable at typical use temperatures. Exposure to elevated temperatures can cause these products to decompose, generating gas and the potential for pressure build-up in closed systems. These products are not corrosive and can be stored in carbon-steel tanks. Avoid contact with strong acids, bases, and oxidizers.

These products absorb water. If low moisture content is critical, precautions should be taken to prevent atmospheric moisture from entering the storage tank. A desiccant unit can be installed on the vent line, or the tank can be blanketed with dry air or nitrogen.

For more information, see the relevant Safety Data Sheet.

**Regulatory Information**

Regulations may exist that govern the manufacture, sale, transportation, use, and/or disposal of UCON™ coating fluids. 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**

- Safety Data Sheet (www.dow.com/webapps/msds/msdssearch.aspx)
- Contact Us (www.dow.com/ucon/contact/index.htm)

For more business information about UCON™ coating fluids, visit the Dow UCON Fluids and Lubricants web site at www.dow.com/ucon/.
References

1 Dow UCON™ Fluids and Lubricants – Base Stocks web site (www.dow.com/ucon/base/index.htm)
2 UCON Fluids and Lubricants, The Dow Chemical Company, Form No. 118-01346-1101 AMS
3 UCON™ Coating Fluid LB-1200-XY23 Material Safety Data Sheet, The Dow Chemical Company
4 UCON Coating Fluid LB-165-Y24 Material Safety Data Sheet, The Dow Chemical Company
6 UCON Fluids and Lubricants: Guide to Selecting UCON Fluids and Lubricants, The Dow Chemical Company, Form No. 118-01576-505 AMS

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