Product Safety Assessment

UCON™ Lubricant 1281


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Names
- Polyalkylene glycol
- Ethylene oxide/propylene oxide copolymer
- CAS No. 9003-11-6
- UCON™ Lubricant 1281

Product Overview
- UCON™ Lubricant 1281 is a water-soluble, medium-viscosity, synthetic anti-wear polyalkylene glycol lubricant. This product is a colorless to yellow liquid with a mild odor. For further details, see Product Description.
- UCON Lubricant 1281 is designed for use in synthetic coolants for low-temperature, ferrous and nonferrous metalworking operations, such as can-drawing, stamping, and cold rolling. It is also used as a foam-control agent. For further details, see Product Uses.
- UCON Lubricant 1281 is intended for industrial use. Worker exposure is possible during manufacture, formulation, transport, or use. Engineering controls and personal protective equipment reduce the potential for exposure. Consumers are not likely to contact this product. For further details, see Exposure Potential.
- Eye contact may cause slight, temporary irritation, although corneal injury is unlikely. Prolonged skin contact may cause slight irritation with local redness. At room temperature, exposure to vapor is minimal. For further details, see Health Information and the relevant Safety Data Sheet.
- UCON Lubricant 1281 is expected to slowly biodegrade in the environment, is not likely to accumulate in the food chain (low bioconcentration potential), and is practically non-toxic to aquatic organisms on an acute exposure basis. For further details, see Environmental Information.
- UCON Lubricant 1281 is thermally stable at recommended storage and normal use temperatures, but can decompose at elevated temperatures. Avoid contact with strong acids, strong bases, and strong oxidizers. For further details, see Physical Hazard Information.

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Manufacture of Product

- **Location** – The Dow Chemical Company manufactures UCON™ Lubricant 1281 at facilities in South Charleston, West Virginia, USA.
- **Process** – The polyalkylene glycol in UCON Lubricant 1281 is a copolymer of ethylene oxide and propylene oxide.

Product Description

UCON™ Lubricant 1281 is a water-soluble, medium-viscosity, synthetic anti-wear polyalkylene glycol lubricant. The polyalkylene glycol component is a random copolymer of ethylene oxide and propylene oxide. This product is a colorless to yellow liquid with a mild odor.

Product Uses

UCON™ Lubricant 1281 is a commercial product designed for use in synthetic coolants for low-temperature, ferrous and nonferrous metalworking operations, such as can drawing, stamping, and cold rolling. It is also used as a foam-control agent. UCON Lubricant 1281 is designed for applications in which hydrolytic stability, low foaming, and low staining properties are important.

Exposure Potential

UCON™ Lubricant 1281 is used primarily in metalworking operations. Based on the uses for this product, individuals could be exposed through:

- **Workplace exposure** – Exposure can occur in facilities that manufacture or formulate UCON Lubricant 1281 or during transport or use. Those working with this product 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 and safety equipment in place to limit exposure. See Health Information.
- **Consumer exposure to UCON Lubricant 1281** – UCON Lubricant 1281 is a commercial product intended for industrial use. Consumers are not likely to come into contact with this product. See Health Information.
- **Environmental releases** – Because UCON Lubricant 1281 is used in monitored industrial applications, the potential for release to the environment is low. In the event of small spills, efforts should be made to capture and contain the product to minimize any spread to surrounding soil and water. Remaining residues can be expected to slowly and ultimately biodegrade in the environment and to be efficiently removed during biological treatment of wastewater. It is not likely to accumulate in the food chain (low bioconcentration potential). 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 appropriate safety equipment. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Contain spilled material if possible. Collect in suitable and properly labeled containers. See Environmental, Health, and Physical Hazard Information.
- **In case of fire** – Use water fog or fine spray, dry chemical extinguishers, carbon dioxide or foam to fight the fire. Alcohol resistant foams (ATC type) are preferred; general purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire-exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream as it may spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots, and globes). If protective equipment is not available or not used, fight fire from a protected location or safe distance. Follow emergency procedures outlined in the Safety Data Sheet carefully. See Environmental, Health, and Physical Hazard Information.

For more information, see the relevant Safety Data Sheet.
Health Information

**Eye contact** – Contact may cause slight, temporary eye irritation. Corneal injury is unlikely.

**Skin contact** – Brief contact is essentially nonirritating to the skin. Repeated contact may cause moderate skin irritation with local redness. Prolonged contact is unlikely to result in absorption of harmful amounts.

**Inhalation** – At room temperature, exposure to vapor is minimal due to low volatility.

**Ingestion** – This product has very low toxicity if swallowed. Small amounts swallowed incidental to normal handling operations are not likely to cause injury.

For more information, see the relevant Safety Data Sheet.

Environmental Information

UCON™ Lubricant 1281 is a water-soluble and non-volatile polyalkylene glycol polymer. If introduced to water, this substance will tend to remain in and move with associated water. The substance will not evaporate from water or soil to the air. This substance will exhibit some tendency to bind to soil or sediment, but may slowly migrate through soil into groundwater if continually spilled/released at a specific location.

UCON Lubricant 1281 is unlikely to persist in the environment. Based on similarity of structure and composition to other substances, this product is expected to slowly and ultimately biodegrade in water and soil environments and to be removed during biological treatment of wastewater.

Due to its high molecular weight, UCON Lubricant 1281 is not likely to accumulate in the food chain (bioconcentration potential is low). The substance is expected to be practically non-toxic to fish and other aquatic organisms on an acute basis.

For more information, see the relevant Safety Data Sheet.

Physical Hazard Information

UCON™ Lubricant 1281 is thermally stable under recommended storage and normal use conditions, but can decompose at elevated temperatures. Generation of gas during decomposition can cause pressure build-up in closed systems.

Avoid contact with strong acids, strong bases, and strong oxidizers.

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™ Lubricant 1281. Information may be found by consulting the relevant Safety Data Sheet, Technical 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)
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For more business information about UCON™ Lubricant 1281 visit the Dow web site for [UCON Fluids and Lubricants](www.dow.com/ucon/).

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