Product Safety Assessment

UCON™ MWL-2 Metalworking Lubricant


Select a Topic:
- Names
- Product Overview
- Manufacture of Product
- Product Description
- Product Uses
- Exposure Potential
- Health Information
- Environmental Information
- Physical Hazard Information
- Regulatory Information
- Additional Information
- References

Names
- CAS No. 9003-11-6
- UCON™ Lubricants
- UCON MWL-2 Metalworking Lubricant

Product Overview
- UCON™ MWL-2 Metalworking Lubricant is a liquid, linear polyalkylene glycol block copolymer that is colorless to yellow in appearance with a mild odor.¹ For further information, see Product Description.
- UCON MWL-2 Metalworking Lubricant is used to formulate synthetic, water-based, Metalworking fluids, especially for difficult-to-machine alloys, such as heavy-duty machining of stainless steel.² For further information, see Product Uses.
- UCON MWL-2 Metalworking Lubricant is produced, distributed, and stored in closed containers. Personnel working with these products in manufacturing operations could be exposed during maintenance, sampling, testing, or other procedures.¹ For further information, see Exposure Potential.
- Eye contact may cause slight temporary irritation. Prolonged skin contact is not likely to cause significant irritation or result in absorption of harmful amounts. At room temperature, inhalation exposure is minimal. This product has low toxicity if swallowed.¹ For further information, see Health Information and request the relevant Safety Data Sheet from the Dow Customer Information Group.
- UCON MWL-2 Metalworking Lubricant is nonvolatile (does not evaporate) and water soluble. This product is expected to biodegrade slowly and completely under environmental conditions and will be efficiently removed in biological wastewater-treatment facilities. This product is not likely to accumulate in the food chain and is practically nontoxic to aquatic organisms on an acute basis.¹ For further information, see Environmental Information.
- UCON MWL-2 Metalworking Lubricant is thermally stable at recommended storage and normal use conditions. Exposure to elevated temperatures can cause this product to decompose, creating pressure build-up in closed systems. Avoid contact with strong acids, strong bases, and strong oxidizers.¹ For further information, see Physical Hazard Information.

¹TM Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow
**Product Safety Assessment: UCON™ MWL-2 Metalworking Lubricant**

**Manufacture of Product**
- **Locations** – The Dow Chemical Company manufactures UCON™ MWL-2 Metalworking Lubricant in facilities in the USA.
- **Process** – UCON MWL-2 Metalworking Lubricant is made by reacting ethylene oxide with propylene oxide to form a liquid, polyalkylene glycol block copolymer.

**Product Description**
The polyalkylene glycol base fluid in UCON™ MWL-2 Metalworking Lubricant is a liquid polyalkylene glycol block copolymer, colorless to yellow in appearance, with a mild odor. This product is soluble in water and functions over a wide pH range.

**Product Uses**
UCON™ MWL-2 Metalworking Lubricant is used to formulate synthetic, water-based, Metalworking fluids, especially for difficult-to-machine alloys such as heavy-duty machining of stainless steel, where cooling and lubrication performance are critical.

**Exposure Potential**
UCON™ MWL-2 Metalworking Lubricant is used in the production of industrial products. Based on the uses for this product, individuals could be exposed through:
- **Workplace exposure** – Exposure can occur either in facilities that manufacture UCON MWL-2 Metalworking Lubricant or in the various industrial or manufacturing facilities that use this product. It is produced, distributed, and stored in closed containers. Those working with UCON MWL-2 Metalworking Lubricant 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 MWL-2 Metalworking Lubricant** – Dow does not sell this product 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, surface water, or groundwater. For small spills, UCON MWL-2 Metalworking Lubricant should be collected in suitable containers for disposal. UCON MWL-2 Metalworking Lubricant is nonvolatile (does not evaporate easily) and soluble in water. When introduced to water, it will tend to remain in, and be transported with, the surface or ground water to which it is released, and will adsorb onto soil, sediment, and suspended solids. This product is expected to biodegrade slowly and completely under environmental conditions and will be efficiently removed in biological wastewater treatment facilities. This product is practically nontoxic to aquatic organisms and has a low potential for bioaccumulation in the food chain. See Environmental, Health, and Physical Hazard Information.
- **Large release** – Industrial spills or releases are infrequent and generally contained. If a large spill does occur, this product should be captured, collected, and disposed of according to applicable governmental requirements. Use appropriate safety equipment. Contain spilled product if possible. Spills on hot, porous insulation may reduce the autoignition temperature, increasing the potential for spontaneous combustion. Prevent from entering into soil, ditches, sewers, waterways, and/or groundwater. See Environmental, Health, and Physical Hazard Information.
- **In case of fire** – Keep people away. Isolate the fire and deny unnecessary entry. Use water spray or fog, carbon-dioxide or dry-chemical extinguishers, or foam to fight the fire. Burning liquids may be extinguished by dilution with water. Do not use a direct water stream as it may spread the fire. Move containers from the fire area if it is possible to do so without hazard. Use a water spray to cool fire-exposed containers and the fire-affected zone until the fire is out and any danger of reignition has passed. Consider the use of unmanned hoseholders or monitor nozzles. Immediately withdraw all personnel from the area in the case of rising sound from venting safety devices or discoloration of the container. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water runoff to reduce the potential for environmental damage. Firefighters should wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing. If protective equipment is not available or not used, fight the fire from a protected location or safe distance. During a fire, smoke may contain the original material in addition to combustion products of varying composition, which may be toxic and/or irritating. Combustion products may include and are not limited to carbon dioxide and carbon monoxide. Containers may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Follow emergency procedures outlined in the Safety Data Sheet carefully. See Environmental, Health, and Physical Hazard Information.

**Trademark of The Dow Chemical Company (“Dow”) or an affiliated company of Dow**
**Product Safety Assessment:** UCON™ MWL-2 Metalworking Lubricant

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

**Health Information**

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

**Skin contact** – Prolonged exposure is not likely to cause significant skin irritation or to result in absorption of harmful amounts.

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

**Ingestion** – These products have low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

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

**Environmental Information**

UCON MWL-2 Metalworking Lubricant is nonvolatile (does not evaporate) and soluble in water. If released to water or soil, it will tend to remain in and be transported with the surface or ground water to which it is released, and will adsorb onto soil, sediment, and suspended solids. UCON MWL-2 Metalworking Lubricant is unlikely to persist in the environment, since this product is expected to be inherently biodegradable according to Organisation for Economic Co-operation and Development (OECD) test guidelines. As such, this product will be efficiently removed in biological wastewater treatment facilities.

This product is not expected to bioaccumulate in the food chain (low bioconcentration potential) and is practically nontoxic to aquatic organisms (LC50/EC50 >100 mg/L for the most sensitive species tested) on an acute basis. The UCON MWL-2 Metalworking Lubricant is not regarded as exhibiting persistent, bioaccumulative, and toxic (PBT) or very persistent and very bioaccumulative (vPvB) properties.

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

**Physical Hazard Information**

UCON MWL-2 Metalworking Lubricant 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. Decomposition products may include aldehydes, alcohols, ethers, hydrocarbons, ketones, organic acids, and polymer fragments.

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

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 UCON™ MWL-2 Metalworking Lubricant. 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 relevant Safety Data Sheet from the Dow Customer Information Group ([www.dow.com/assistance/dowcig.htm](http://www.dow.com/assistance/dowcig.htm))
- Contact Us ([www.dow.com/ucon/contact/index.htm](http://www.dow.com/ucon/contact/index.htm))

Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow
Product Safety Assessment: UCON™ MWL-2 Metalworking Lubricant

For more business information about UCON™ MWL-2 Metalworking Lubricant, visit the web site for UCON Fluids and Lubricants – Metalworking Fluids (www.dow.com/ucon/formulated/fluids/metal.htm).

References
1. The Dow Chemical Company. UCON™ MWL-2 [Metalworking Lubricant], Material Safety Data Sheet
2. The Dow Chemical Company. UCON™ MWL-2 Metalworking Lubricant. Form No. 816-00074
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.

No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to “Dow” or the “Company” mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

Back to top

Form No. 233-01194-MM-0814