

# Chemical Solvents – Methyl Isobutyl Carbinol (MIBC) & Diisobutyl Ketone (DIBK)

## Product Stewardship Summary

(CAS number 108-11-2 Methyl Isobutyl Carbinol & 108-83-8 Diisobutyl Ketone)

### What are Chemical Solvents?

Chemical Solvents are liquid oxygenated solvents which are produced through the hydration of propylene. The chemical solvents referred to in this document are Methyl Isobutyl Carbinol (MIBC) and Diisobutyl Ketone (DIBK).

### How are Chemical Solvents Used?

MIBC and DIBK are used in paints and coatings, cleaning products, industrial processes and adhesives.

### Health, Safety and Environmental Considerations

Chemical Solvents are usually flammable in their liquid and vapor forms and flammable atmospheres can be created at room temperatures. This means that any environment where chemicals solvents are being used needs to be well ventilated. They should be kept away from heat and open flame. As the vapour is heavier than air, it may spread along the ground, so care needs to be taken that the vapour is not ignited by a distant source.

Short-term inhalation of very high concentrations of minor chemicals solvents, well in excess of the occupational exposure limits, can result in unconsciousness. The effects of swallowing large quantities may include narcosis (numbness and stupor), coma and even death.

Short-term, high-level exposure to minor chemical solvents can result in dizziness, drowsiness and irritation to the eyes, respiratory system and skin. If the skin repeatedly comes into contact with chemical solvents, it can result in skin dryness or cracking.

The American Occupational and Health Administration (OSHA) has assigned an eight-hour Permissible Exposure Limit for occupational exposure limit of 25 parts per million (ppm) (100 mg/m<sup>3</sup>, [skin]) for general and construction industries for MIBC and 50 parts per million (ppm) (290 mg/m<sup>3</sup>) for general, construction and maritime industries for DIBK.

Chemical solvents may be moderately toxic to aquatic organisms. They are biodegradable and have a low potential to bio-accumulate. If released to soil, MIBC and DIBK will both evaporate and leach into the ground. They are expected to have high mobility in soil, which may contaminate ground water.

## Storing and Transporting Chemical Solvents

Chemical Solvents are transported by tank truck, rail car, and vessel. During transport, product is stored in bulk containers that meet local and international regulated specifications.

## Risk Characterization Summary

Risks associated with exposure to this product have been evaluated for the following “chain-of-commerce” activities: manufacture, storage, product transfer, transportation, and customers/markets. They are manufactured, stored and transported to customers in closed systems. Depending on the customer, end uses may vary from use as an intermediate for the manufacture other chemicals, commercial products, or certain formulated consumer products. Proper equipment design and handling procedures maintain low risk from exposure where used as an intermediate. Exposures may be higher in commercial and consumer applications. To minimize risk, additional controls, such as, special handling procedures and protective packaging are implemented.

---

This product stewardship summary 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 chemical’s applicable [Safety Data Sheet](#), which should be consulted before use of the chemical. This product stewardship summary does not supplant or replace required regulatory and/or legal communication documents.



### Disclaimer

The information contained in this publication is, to the best of our knowledge, true and accurate, but any recommendations or suggestions that may be made are without guarantee, since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

### Shell Chemicals

The expression “Shell Chemicals” refers to the companies of the Shell Group of companies that are engaged in the chemical businesses. Each of the companies that make up the Shell Group of companies is an independent entity and has its own separate identity.