

Isopropyl Alcohol Product Stewardship Summary

(CAS number 67-63-0)

Chemical Formula for Isopropyl Alcohol

C₃H₈O

What is Isopropyl Alcohol?

Isopropyl alcohol (IPA), also known as 2-propanol or isopropanol, is produced by the hydration of propylene.

Shell Chemicals supplies IPA in two different grades: industrial grade and United States Pharmacopoeia (USP)/GMP grade, the latter of which is produced applying Good Manufacturing Practices (GMP) throughout the production and supply chain. GMP ensures that products and their ingredients sold into food and drug applications possess the quality, purity and safety which they purport to possess and are suitable for their intended use.

How is Isopropyl Alcohol Used?

Isopropyl Alcohol is used in a variety of applications including as a solvent for industrial processes and coating; as a component in cleaning, car care and deicing products; as a wetting agent for printing inks and as a feedstock in the manufacture of ester and Mogas/Luboil additives.

Health, Safety and Environmental Considerations

IPA is highly flammable in its liquid and vapor forms and flammable atmospheres can be created at temperatures as low as 54°F/12°C. This means that any environment where IPA is being used needs to be well ventilated. It 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.

Continuous inhalation of very high concentrations of IPA, well in excess of the occupational exposure limits, can result in unconsciousness and death. The effects of swallowing large quantities of IPA are similar to the effects of excessive alcohol intake. This can include narcosis (numbness and stupor), coma or death.

Short-term, high-level exposure to IPA can result in dizziness, drowsiness and/or irritation to the eyes.

The American Occupational Safety and Health Administration (OSHA) has assigned an eight-hour Permissible Exposure Limit for occupational exposure limit of 400 parts per million (ppm) (980 mg/m³) for general, construction and shipyard employment industries.

IPA has low toxicity to aquatic organisms. It is biodegradable and has a low potential to bioaccumulate. If released to soil, IPA will both evaporate and leach into the ground. It is expected to have high mobility in soil, which may contaminate ground water.

Storing and Transporting Isopropyl Alcohol

IPA is transported by tank truck, rail car and vessel. During transport, the 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. It is 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.



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