Dipropylene Glycol (DPG)
Product Stewardship Summary
(CAS number 25265-71-8)
Chemical Formula for Dipropylene Glycol (DPG)
C₆H₁₄O₃

What is Dipropylene Glycol (DPG)?
DPG is a derivative of propylene oxide (PO) and is produced in a two-step process. The first step is the reaction of PO with water into a mixture of Monopropylene glycol (MPG) and DPG and the second step is the distillation and purification of the mixture into its two separate components, with MPG being the main component.

DPG consists of three isomers 1,1′-oxidi-2-propanol, 2-(2'-hydroxypropoxy)-1-propanol and 2,2′-oxidi-1-propanol and is a colourless, viscous and odourless liquid. It is highly hygroscopic and miscible in all ratios with water and most organic solvents.

How is Dipropylene Glycol (DPG) Used?
Industrial uses of DPG include as a raw material to produce polymers such as polyester and alkyd resins or as plasticizer in other polymers, for example PVC. DPG can also be a component in cleaning agents and printing inks or act as a carrier in many other formulations; for example, personal care products such as fragrances, soaps and cosmetics.

Health, Safety and Environmental Considerations
DPG has low acute toxicity by oral, dermal or inhalation routes. It is non-irritating to the skin and eye and there is no evidence of allergic skin reactions. DPG is not considered to be carcinogenic or genotoxic, nor does it have effects on fertility or reproduction.

DPG is readily biodegradable, is not expected to bio-accumulate and is of very low toxicity to aquatic organisms.

DPG is not classified as flammable, but will burn at temperatures over 200 - 244°F/90 - 20°C.

Storing and Transporting Dipropylene Glycol (DPG)
Dipropylene glycol is transported by tank truck, rail car and vessel as bulk products and by tank truck and vessel as packed product.

DPG is hygroscopic and requires storage equipped with drying devices to protect the product from humidity. Storage temperature should not exceed 104°F/40°C. In cold climates, tank heating devices and insulation must be installed.
Risk Characterization Summary

Risks associated with exposure to these products 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 of 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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