Chemical identity

Chemical formula:
R-O-CH₂CH(O)CH₂ or \( H₂C(O)HCH₂C-O-R-O-CH₂CH(O)CH₂ \)

Other names:
Alkyl glycidyl or diglycidyl ethers, Epodil 741, Epodil 746, Epodil 747, Epodil 748 (R718-A), Epodil 749, Epodil 757 and Epodil 759

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Epodil® epoxy diluents are reactive diluents that are used as viscosity reducers in many epoxy applications. These applications include tooling, civil engineering applications, electrical applications, laminates, flooring, mortars, potting, coatings and two-component adhesives. Because of their similar chemical characteristics, the products are discussed collectively in this health, safety and environmental information summary unless expressly addressed separately.

Uses and benefits

Epodil reactive epoxy diluents are used to reduce an epoxy’s viscosity to improve surface wetting and adhesion. Epoxy resins with added reactive diluents also generally exhibit longer “pot life,” i.e., the time you have after mixing to apply the epoxy.

Physical and chemical properties

Epodil reactive epoxy diluents are clear, colorless, low-viscosity liquids. They have very limited water solubility and generally have low volatility. Epodil 741 is flammable; other products are not flammable, having flash points greater than 93°C.
Health precautions

Epodil reactive epoxy diluents must be handled with caution. Exposure to aerosols or vapors in high concentration may cause nose, throat and lung irritation. These products are irritating to skin and eyes, and may cause sensitization by skin contact. Epodil 741 is toxic by dermal contact, and is possibly mutagenic and carcinogenic; the other products do not have these properties.

Environmental effects

Epodil reactive epoxy diluents can be manufactured, used and disposed of safely. Emissions to air can be minimized during manufacture and use. These products are not readily biodegradable in wastewater and most are only slightly to moderately toxic to aquatic organisms. Epodil reactive epoxy diluents should not be released to waterways.

Exposure potential and risk management measures

Industrial use

If there is a possibility of exposure to reactive epoxy diluents, users should use eye and skin protection, including chemical-resistant goggles and face shield, gloves, long-sleeved coveralls, and safety shoes or rubber boots. Good ventilation is critical when working with reactive epoxy diluents. Local exhaust ventilation should be designed to draw vapors away from the user’s breathing zone and to reduce vapor concentrations to acceptable concentrations at all workstations.

Once epoxy products have cured, the components, including the Epodil reactive epoxy diluents, are bound in a solid polymeric matrix and present a low probability for health or environmental exposure.

Consumer use

Epodil reactive epoxy diluents are used to produce consumer products in a cured form. They are not sold directly for consumer use.

Regulatory information

Several regulations govern the manufacture, sale, transportation, use and disposal of Epodil reactive epoxy diluents. These laws vary by country and geographic region. You can find general regulatory information in the Material Safety Data Sheet.

Information resources

We developed this Product Stewardship Summary to give you a general overview of the chemical. This summary is not meant to provide emergency response or medical treatment information. You can find in-depth safety and health information on the Material Safety Data Sheet.

Conclusion

Epodil reactive epoxy diluents are widely used in epoxy-based products, and users can handle them safely with minimal safety, health and environmental effects when they follow the referenced industry and company guidelines.

For more information, please contact us at:

Technical Information Center
T 800-345-3148 (U.S.)
T 1-610-481-6799 (other locations)
F 610-481-4381
cheminfo@airproducts.com
Monday–Friday,
8:00 a.m.–5:00 p.m. EST