LANXESS
Energizing Chemistry

Di(ethylhexyl) phosphate

This document provides a brief description of Di(ethylhexyl) phosphate, its uses, and the potential hazards associated with short and long term exposure. Environmental impact information for accidental releases is included. This information is general in nature and is not intended as a replacement for the safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS Corporation safety data sheet.

Identification

Product Name: BAYSOLVEX D2EHPA PURE

Chemical Name: Diethylhexyl phosphate

Synonym(s):
bis(2-Ethylhexyl) hydrogen phosphate
bis(2-Ethylhexyl) orthophosphoric acid
bis(Isooctyl) phosphate
Dioctylphosphate
Di-(2-ethylhexyl) phosphoric acid

CAS Number: 298-07-7

Description

Overview: Di(ethylhexyl) phosphate is a colorless, viscous liquid at ambient temperatures. The chemical has a faint odor.

Uses: Di(ethylhexyl) phosphate is sold by LANXESS for use as a solvent in extraction processes that separate, purify, enrich and recover metal salts from liquids. The chemical is also used as a precursor for wetting agents and other textile auxiliaries and also as a mold release agent.

Properties:

Melting Point:	-50°C (-58°F)
Flash Point:	181°C (358°F) closed cup
Solubility in Water:	Insoluble (0.182 g/l)
Auto-ignition:	255°C (491°F)

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, at bulk unloading, storage and staging areas and during transfers in facilities using Di(ethylhexyl) phosphate in the manufacture of other products. A much lower potential for exposure exists in facilities using Di(ethylhexyl) phosphate in closed manufacturing processes by trained personnel.

Employee Training

Workers handling Di(ethylhexyl) phosphate should be trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved positive pressure air-supplied respirator should be worn when airborne concentrations are unknown. In addition, LANXESS recommends splash goggles, full-face shield, chemical resistant protective suit and suitable protective footwear be worn when handling Di(ethylhexyl) phosphate.

Consumer Exposure

LANXESS Corporation does not sell Di(ethylhexyl) phosphate to the general public.

Short-Term Health Effects

Di(ethylhexyl) phosphate is highly corrosive to the skin and eyes with symptoms of redness and burning sensation. Prolonged contact may cause severe burns. Inhalation may be severely irritating to the respiratory system, with symptoms of coughing, sore throat and burning sensation. Ingestion may cause severe burns to the mouth, throat and stomach.

Long-Term Health Effects

Repeated or prolonged contact may cause severe burns to the skin and/or eyes.

Physical Hazards

Di(ethylhexyl) phosphate is stable under normal conditions of use. Contact with non-noble metals, iron, aluminum and zinc may release hydrogen gas. Vapors may form explosive mixtures with air when heated. Heating to decomposition may release carbon monoxide, carbon dioxide, phosphorus oxides and other potentially toxic/corrosive fumes and gases. Avoid heat, open flames and other potential sources of ignition.

Potential Environmental Impact

Di(ethylhexyl) phosphate is readily biodegradable. A release to water may pose a danger to fish (moderate toxicity), invertebrates (moderate toxicity) and aquatic plants (moderate toxicity) prior to degradation. Di(ethylhexyl) phosphate may adsorb to suspended soils and sediments. The chemical is not expected to accumulate in the tissues of aquatic organisms.

Conclusion

Under normal conditions of anticipated use as described in this Product Safety Assessment, and if the recommended safe use and handling procedures are followed, Di(ethylhexyl) phosphate is not expected to pose a significant risk to human health or the environment.

References

International Chemical Safety Card, International Programme on Chemical Safety (IPCS)

Safety Data Sheet (SDS), BAYSOLVEX D2EHPA PURE, LANXESS Corporation

MedlinePlus Medical Encyclopedia, U.S. National Library of Medicine and the National Institutes of Health

ToxNet Hazardous Substance Data Bank, U.S. National Library of Medicine, National Institutes of Health and the U.S. Department of Health and Human Services

Contact Information

LANXESS Corporation, Product Safety & Regulatory Affairs, 111 RIDC Park West Drive, Pittsburgh, PA 15275-1112, USA, Phone 1-800-526-9377 [1-800-LANXESS]

Notices

Use and Application Information

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether they are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use. No license is implied or in fact granted under the claims of any patent.