

Poly(2,6-Dibromophenylene) Oxide

This document provides a brief description of phenol, poly(2,6-dibromophenylene) oxide, 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

Chemical Name: Phenol, 2,4(or 2,6)-dibromo-, homopolymer

Synonym(s): 2,4(or 2,6)-Dibromophenol homopolymer

CAS Number: 69882-11-7

Applicable LANXESS Materials:

Uniplex FRP 64	Uniplex FRP 64P
Uniplex FRP 64 Crude Wetcake	Uniplex FRP-64 Pure Wetcake

Description

Overview: Poly(2,6-dibromophenylene) oxide is a light-brown solid at ambient temperatures. The product is sold in powder form and has a distinct (phenolic) odor.

Uses: The brominated polymer, as sold by LANXESS, is a flame retardant in a variety of plastic products (thermoplastic polyesters and polyamides).

Properties:

Solubility in Water:	Slight
Relative Density:	2.3 g/cm ³ (20°C)
Decomposition Temp.:	750 - 930°C (1382 - 1706°F)

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure to this substance exists during manufacture, and in unloading, storage, staging and transfer operations at facilities using materials containing the polymer as an additive. A much lower potential for exposure exists in facilities using the substance in closed manufacturing processes by trained personnel.

Employee Training

Workers handling materials poly(2,6-dibromophenylene) oxide should be trained to implement proper handling procedures and to understand the potential health and physical hazards of the substance. Process enclosures, explosion-proof local exhaust ventilation or other engineering controls should be used to keep worker exposure to airborne contaminants below any recommended or statutory limits. Engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. LANXESS recommends safety glasses with side-shields, permeation resistant gloves, work clothing (long pants and long-sleeved shirts) and suitable protective footwear be worn when handling materials containing this material. In cases where ventilation is insufficient or airborne concentrations are unknown, a NIOSH approved, air-purifying particulate respirator with N-95 filters should be worn.

Persons with a history of skin sensitization problems should not be employed in any process in which this product is used.

Consumer Exposure

LANXESS Corporation does not sell poly(2,6-dibromophenylene) oxide, nor materials containing the flame retardant, to the general public.

Short-Term Health Effects

This material is harmful if swallowed. Symptoms of ingestion may include abdominal pain, nausea, vomiting and diarrhea. The substance also causes slight irritation upon contact with eyes and/or skin.

Long-Term Health Effects

Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Physical Hazards

Under normal conditions of use, poly(2,6-dibromophenylene) oxide is stable. However, the polymer is incompatible with strong oxidizing agents. Fine dust clouds may form explosive mixtures with air. Heating to decomposition may release oxides of carbon, acid halides, and hydrogen bromide. Avoid heat, sparks, and other sources of ignition.

Potential Environmental Impact

No known significant effects or critical hazards.

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, poly(2,6-dibromophenylene) oxide is not expected to pose a significant risk to human health or the environment.

References

Additives for Thermoplastics: Flame Retardants – Brominated, 2017, LANXESS Corporation
ChemAdvisor, Poly-(2,6-dibromophenylene oxide), 2017
Safety Data Sheet (SDS), Uniplex FRP 64, LANXESS Corporation

Contact Information

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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.