

Levagard TEP-Z

This document provides a brief description of Levagard TEP-Z, its uses, and the potential hazards associated with short-term 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 material safety data sheet (SDS), product label and other safe handling literature. For additional information consult the LANXESS Corporation safety data sheet.

Identification

Chemical Name:	Triethyl phosphate
Synonym(s):	Ethyl phosphate Phosphoric acid, triethyl ester Triethoxyphosphine oxide ester Tris(ethyl) phosphate
CAS Number:	78-40-0

Description

Overview:	Levagard TEP-Z is a colorless, odorless liquid at ambient temperatures.										
Uses:	Levagard TEP-Z is used as a processing aid or additive in the manufacture of many commercial/industrial products, including polymers, adhesives, sealants, coatings, fillers, putties, plasters, modelling clays, plant protection products and more. The substance is also present in a wide range of consumer end use products.										
Properties:	<table><tr><td>Solubility in Water:</td><td>Soluble</td></tr><tr><td>Boiling Point:</td><td>215.5°C (419.9°F)</td></tr><tr><td>Melting Point:</td><td>-56.4°C (-69.5°F)</td></tr><tr><td>Flash Point:</td><td>115°C (239°F) closed cup</td></tr><tr><td>Auto-Ignition:</td><td>454°C (849°F)</td></tr></table>	Solubility in Water:	Soluble	Boiling Point:	215.5°C (419.9°F)	Melting Point:	-56.4°C (-69.5°F)	Flash Point:	115°C (239°F) closed cup	Auto-Ignition:	454°C (849°F)
Solubility in Water:	Soluble										
Boiling Point:	215.5°C (419.9°F)										
Melting Point:	-56.4°C (-69.5°F)										
Flash Point:	115°C (239°F) closed cup										
Auto-Ignition:	454°C (849°F)										

Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture and in storage, transfer, maintenance and sampling operations at facilities using Levagard TEP-Z as a processing aid or additive. A much lower potential for exposure exists in facilities using the product in closed manufacturing processes by trained personnel.

Employee Training

Workers should be trained to implement proper handling procedures and to understand the potential health and physical hazards of Levagard TEP-Z. Process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure to airborne contaminants below any recommended or statutory limits. In cases where airborne concentrations are unknown, a NIOSH approved air-purifying respirator with organic vapor cartridges and particulate prefilter should be used to minimize exposure. In addition, LANXESS recommends tightly fitting safety goggles, impervious (nitrile rubber or polyvinyl chloride) gloves and suitable protective clothing be worn when handling Levagard TEP-Z.

Consumer Exposure

LANXESS Corporation does not sell Levagard TEP-Z to the general public. Consumers may be exposed to trace amounts of Levagard TEP-Z through use of products that include the substance as an additive or ingredient, including paints, coatings, adhesives, fabrics, flooring products, paper products, furniture, toys, construction materials, foot-wear, leather and leather treatments, electronic equipment, tires and brake pads.

Short-Term Health Effects

Levagard TEP-Z is severely irritating to the eyes. Symptoms of eye contact may include redness, tearing, stinging and swelling. Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Symptoms of inhalation or ingestion may also include dizziness, drowsiness or weakness.

Long-Term Health Effects

Prolonged or repeated exposure may cause serious eye damage.

Physical Hazards

Levagard TEP-Z is stable under normal conditions of use. Avoid contact with strong oxidizing agents and bases. Heating to decomposition may produce carbon dioxide (CO₂), carbon monoxide and phosphorus oxides. Avoid heat, open flames and other potential sources of ignition. In the event of a fire there is a risk of explosion, which can release toxic and ignitable gases.

Potential Environmental Impact

Levagard TEP-Z is expected to be persistent in the environment, though 98% biodegradation was seen in 21 days in an OECD 302C study. A release to environmental water sources is unlikely to pose a risk to fish, aquatic invertebrates and aquatic plants. This substance does not meet the criteria for being persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB), since only persistence criteria are met.

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, Levagard TEP-Z is not expected to pose a significant risk to human health or the environment.

References

ECHA InfoCard, Triethyl Phosphate, European Chemicals Agency

International Chemical Safety Card, Triethyl phosphate, World Health Organization (WHO) and the International Labour Organization (ILO)

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

Safety Data Sheet (SDS), Levagard TEP-Z, LANXESS Corporation

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.