

Zinc Oxide

This document provides a brief description of Zinc Oxide, 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:	Zinc Oxide
Synonym(s):	C.I. Pigment White 4
CAS Number:	1314-13-2

Description

Overview:	Zinc oxide is an odorless, white powder.
Uses:	Zinc oxide can be used in skincare and cosmetics, rubber manufacturing, pharmaceuticals, industrial applications electronics, and agriculture.
Properties:	
Solubility:	Insoluble 2.9 mg/l, 20°C <50 mg/l, 20°C (nanoform)
Melting Point:	1975°C (3587°F)

Exposure and Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists during manufacture, at storage and staging areas and within operations where zinc oxide is used as an additive or processing aid in the manufacture of other products. A much lower potential for exposure exists in facilities using the chemical 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 zinc oxide. Local and general exhaust ventilation 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 particulate prefilter should be used to minimize exposure. In addition, LANXESS recommends safety glasses with side shields, impervious gloves and suitable protective clothing be worn when handling zinc oxide.

Consumer Exposure

LANXESS Corporation does not sell zinc oxide to the general public. Consumers may be exposed to trace amounts of the chemical compound via dermal contact, inhalation of particulates, and/or ingestion.

Short-Term Health Effects

Zinc oxide is not expected to be irritating to skin, or eyes and is not expected to be harmful if swallowed. Inhalation of particulates may cause irritation to the respiratory tract with coughing or sneezing.

Long-Term Health Effects

No adverse chronic health effects are expected.

Physical Hazards

Zinc oxide is stable under normal conditions of use. Avoid contact with acids and bases.

Potential Environmental Impact

Zinc oxide has a very low solubility and will therefore not release zinc ions. However, prolonged exposure at sufficient levels may cause environmental toxicity

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, zinc oxide is not expected to pose a significant risk to human health or the environment.

References

ECHA InfoCard, Zinc Oxide, European Chemicals Agency

Chemical Book, Triiron Tetraoxide, ChemicalBook

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.