Vulkanox 4020 LG

This document provides a brief description of Vulkanox 4020 LG, 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 safety data sheet.

Identification

Product Name:	Vulkanox 4020 LG
Chemical Name:	N-(1,3-Dimethylbutyl)-N'-phenyl-p-phenylenediamine
Synonym(s):	1,4-Benzenediamine, N-(1,3-dimethylbutyl)-N'-phenyl- 6PPD N-(4-Methyl-2-pentyl)-N'-phenyl-1,4-diaminobenzene p-Phenylenediamine, N-(1,3-dimethylbutyl)-N'-phenyl-
CAS Number:	793-24-8

Description

Overview: Vulkanox 4020 LG is a brown to violet solid at ambient temperatures and is slightly aromatic.

Uses: LANXESS' Vulkanox 4020 LG is produced synthetically for use as an antioxidant or antiozonant in the production of tires and other rubber products. The chemical can also be used as an antidegradant in fuel additives, in monomer distillation operations, and in the production of tires and other rubber products.

Properties:

Melting Point:	113-118°F (45-47.78°C)
Boiling Point:	> 329°F (165°C) @ 1 mmHg
Flash Point:	397°F (202°C)
Solubility in Water:	Low

Potential Human Health Effects

Occupational Exposure

Potential for exposure exists during manufacture, at transloading facilities, during transfers to storage or staging areas and—in its application as a rubber antidegradant—during the charging of mixers at operations using the chemical in the manufacture of rubber goods.

Employee Training

Workers handling Vulkanox 4020 LG are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. NOISH approved, air-purifying particulate respirators are recommended for personnel who may be likely to come in direct contact with the substance. In addition, LANXESS recommends that workers wear goggles, long-sleeved shirts, long pants and gloves when handling Vulkanox 4020 LG to minimize skin contact.

Consumer Exposure

LANXESS Corporation does not sell this product to the general public. Rubber goods using Vulkanox 4020 LG as an antidegradant retain the substance in encapsulated form in the final product. As a result, persons susceptible to allergic skin reactions may experience “tennis shoe” dermatitis as a result of direct skin contact with shoes, elastic waistbands and other products containing Vulkanox 4020 LG. Skin irritation is typically temporary.

Short-Term Health Effects

Short-term exposure to Vulkanox 4020 LG may cause minor irritation to the skin or eyes, with symptoms of redness and itching. Susceptible individuals may also experience an allergic reaction as a result of direct skin contact with the chemical. Symptoms include redness, itching, swelling and rash. Vulkanox 4020 LG is not expected to be harmful if swallowed.

Long-Term Health Effects

Long-term or repeated contact with Vulkanox 4020 LG may cause skin sensitization.

Physical Hazards

Vulkanox 4020 LG is a stable, non-volatile solid at room temperature. Avoid contact with strong oxidizers. Large concentrations of dust may be explosive. Exposure to heat, open flames and other potential sources of ignition must be avoided.

Potential Environmental Impact

Vulkanox 4020 LG is readily biodegradable under prolonged exposure to sunlight and degrades rapidly in contact with environmental water sources. Vulkanox 4020 LG may pose a potential danger to fish (high toxicity), invertebrates (high toxicity) and aquatic plants (high toxicity) prior to biodegradation. Vulkanox 4020 LG does have the potential to accumulate in fatty tissues.

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, Vulkanox 4020 LG 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), VULKANOX 4020 LG, LANXESS Corporation ***MedlinePlus Medical Encyclopedia***, U.S. National Library of Medicine and the National Institutes of Health

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