LANXESS
Energizing Chemistry

Chlorobenzene

This document provides a brief description of Chlorobenzene, 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:	Chlorobenzene
Chemical Name:	Chlorobenzene
Synonym(s):	Benzene chloride Chlorobenzol Phenyl chloride
CAS Number:	108-90-7

Description

Overview: Chlorobenzene occurs naturally and is also produced synthetically. The volatile chemical is a colorless liquid at ambient temperatures with an almond-like odor.

Uses: LANXESS's Chlorobenzene is used primarily as an intermediate in the production of other chemicals. It is also used as an industrial solvent and degreaser.

Properties:

Boiling Point:	Approx. 269.6°F (132°C)
Flash Point:	80.6°F (27°C)
Solubility in Water:	Slight
Melting Point:	-50.8°F (-46°C)

Potential Human Health Effects

Occupational Exposure

Occupational exposure to Chlorobenzene may occur through inhalation or skin contact during manufacture and at transloading, storage and staging areas. Vapor concentrations may develop rapidly in solvent spraying operations without proper ventilation. A much lower potential for exposure exists within facilities using the chemical in the manufacture of other products, since the majority of Chlorobenzene sold by LANXESS is used in closed manufacturing processes by trained personnel.

Employee Training

Workers handling Chlorobenzene are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved air-purifying respirator is recommended for transloading, unloading and other operations not contained within a closed system. In addition, LANXESS recommends that goggles, permeation resistant clothing, gloves and foot protection be worn when handling Chlorobenzene.

Consumer Exposure

LANXESS does not sell this product to the general public and it is not used as an ingredient in products intended for consumer use. The general population may be exposed to Chlorobenzene through consumption of contaminated drinking water or food (e.g. fish).

Short-Term Health Effects

Inhaling Chlorobenzene may cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Inhalation or ingestion of sufficient quantities may cause nausea or nervous system effects with symptoms of dizziness, drowsiness, headache, numbness, lack of coordination or confusion. Unconsciousness may occur with severe overexposure. Short-term skin or eye contact may cause irritation with symptoms of redness, itching or burning.

Long-Term Health Effects

Long-term or repeated inhalation, ingestion or skin contact may result in respiratory tract irritation, headache, kidney damage or liver damage. Prolonged eye contact with Chlorobenzene may cause conjunctivitis (redness and inflammation of the eyes).

Physical Hazards

Chlorobenzene is a flammable liquid. Vapors or mist may present a fire or explosion hazard if exposed to high temperatures or an ignition source. Burning may release hazardous decomposition products. Care should be taken to avoid contact with strong oxidizing agents and bases. Do not pressurize.

Potential Environmental Impact

Chlorobenzene degrades rapidly in water and it leaves no detectable trace in well aerated soils after 1–2 weeks. The chemical may persist for longer periods in heavy soils where evaporation is prohibited. Accumulation in fatty tissues of fish may occur. As a result, an accidental release in liquid form (e.g. spills) may pose a danger to fish (high toxicity), invertebrates (moderate toxicity) and aquatic plants (moderate toxicity) prior to degradation. Facilities handling Chlorobenzene must have a system in place for dealing with such emergencies.

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

References

Concise International Chemical Assessment Document (CICAD) 60, International Programme on Chemical Safety (IPCS)

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

Safety Data Sheet (SDS), Chlorobenzene, LANXESS Corporation

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

Public Health Statement for Chlorobenzene, Agency for Toxic Substances and Disease Registry (ATSDR)

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

Contact Information

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Notices

Use and Application Information