

2,3-Dichloronitrobenzene

This document provides a brief description of 2,3-Dichloronitrobenzene, 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:	2,3-Dichloronitrobenzene
Chemical Name:	2,3-Dichloronitrobenzene
Synonym(s):	1,2-Dichloro-3-nitrobenzene 1-Nitro-2,3-dichlorobenzene n-Methylbenzenamine
CAS Number:	3209-22-1

Description

Overview:	2,3-Dichloronitrobenzene is a colorless to yellow solid at ambient temperatures. The chemical has a characteristic odor.								
Uses:	2,3-Dichloronitrobenzene is used as an intermediate in the production of dyes, antimicrobials and agricultural products.								
Properties:	<table><tr><td>Melting Point:</td><td>Approx. 142°F (61.11°C)</td></tr><tr><td>Boiling Point:</td><td>Approx. 500°F (260°C)</td></tr><tr><td>Flash Point:</td><td>Approx. 253.4°F (123°C)</td></tr><tr><td>Solubility in Water:</td><td>Soluble</td></tr></table>	Melting Point:	Approx. 142°F (61.11°C)	Boiling Point:	Approx. 500°F (260°C)	Flash Point:	Approx. 253.4°F (123°C)	Solubility in Water:	Soluble
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Potential Human Health Effects

Occupational Exposure

Potential for occupational exposure exists through inhalation, ingestion, skin or eye contact during the manufacture of 2,3-Dichloronitrobenzene and at transloading, storage, and staging areas. Since the majority of 2,3-Dichloronitrobenzenes sold by LANXESS are used in closed manufacturing processes by only trained personnel, a much lower potential for exposure exists in facilities using the chemical as an intermediate in the manufacture of other products.

Employee Training

Workers handling 2,3-Dichloronitrobenzene are trained to implement proper handling procedures and to understand the potential health and physical hazards of this product. A NIOSH approved respirator is recommended for transloading, unloading and other operations not contained within a closed system. In addition, LANXESS recommends that goggles, permeation resistant clothing, heat resistant gloves and foot protection be worn when handling 2,3-Dichloronitrobenzene.

Consumer Exposure

LANXESS does not sell 2,3-Dichloronitrobenzene to the general public. Consumers may be exposed to trace amounts of the chemical through ingestion of drinking water and certain foods.

Short-Term Health Effects

Symptoms of overexposure to 2,3-Dichloronitrobenzene may include coughing, headache, dizziness, confusion, chest pain, rapid heart rate, nausea, vomiting and methemoglobinemia, a temporary condition that reduces the ability of blood to carry oxygen. Short-term skin or eye contact may be irritating with symptoms of redness and itching. These symptoms may be delayed.

Extreme cases of oral or inhalation exposure may cause respiratory failure.

Long-Term Health Effects

Long-term or repeated skin contact may result in dryness and cracking of the skin. Chronic inhalation or ingestion may result in kidney damage.

Physical Hazards

2,3-Dichloronitrobenzene is stable under normal conditions of use. Avoid contact with strong oxidizing agents, acids, bases, amines, and non-noble metals. High concentrations of 2,3-Dichloronitrobenzene dust particles may form explosive mixtures with air. Heating to decomposition may release toxic hydrogen chloride and nitrogen oxide fumes. Exposure to heat, open flames and other potential sources of ignition must be avoided.

Potential Environmental Impact

Solid 2,3-Dichloronitrobenzene degrades slowly and—in the event of a spill—is readily removed from the environment. Vapors are effectively scrubbed from stack emissions and fugitive emissions degrade in the atmosphere from exposure to sunlight. 2,3-Dichloronitrobenzene released to water may adsorb into sediments, posing a potential danger to fish (moderate toxicity), invertebrates (high toxicity) and plants (high 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, 2,3-Dichloronitrobenzene is not expected to pose a significant risk to human health or the environment.

References

2,3-Dichloronitrobenzene Screening Information Data Set (SIDS), Organization for Economic Cooperation and Development

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

Safety Data Sheet (SDS), 2,3-Dichloronitrobenzene, LANXESS Corporation

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

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

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