

Cyclohexylamine

This document provides a brief description of Cyclohexylamine, 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:	Cyclohexylamine
Chemical Name:	Cyclohexylamine
Synonym(s):	Aminocyclohexane CHA Hexahydroaniline Hexahydrobenzenamine
CAS Number:	108-91-8

Description

Overview:	Cyclohexylamine is a clear to light yellow liquid at ambient temperatures (color darkens with exposure to air), with a strong amine (fishy) odor.										
Uses:	LANXESS's Cyclohexylamine is used primarily as a corrosion inhibitor for boiler water treatment and in the manufacture of synthetic rubbers.										
Properties:	<table><tr><td>Melting Point:</td><td>Approx. 1.4°F (-17°C)</td></tr><tr><td>Flash Point:</td><td>82.4°F (28°C)</td></tr><tr><td>Solubility in Water:</td><td>Miscible</td></tr><tr><td>Auto-ignition:</td><td>554°F (290°C)</td></tr><tr><td>Boiling Point:</td><td>134.5</td></tr></table>	Melting Point:	Approx. 1.4°F (-17°C)	Flash Point:	82.4°F (28°C)	Solubility in Water:	Miscible	Auto-ignition:	554°F (290°C)	Boiling Point:	134.5
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Potential Human Health Effects

Occupational Exposure

Occupational exposure to Cyclohexylamine may occur in maintenance operations where the chemical is used as a corrosion inhibitor, during manufacture, and at transloading, storage and staging areas. A lesser potential for exposure exists within facilities using the chemical in the manufacture of other products, since the majority of Cyclohexylamine sold by LANXESS is used in closed manufacturing processes by trained personnel.

Employee Training

Workers handling Cyclohexylamine 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 Cyclohexylamine.

Consumer Exposure

LANXESS does not sell this product to the general public and no residuals are expected in products manufactured using this chemical as an intermediate.

Short-Term Health Effects

Cyclohexylamine is corrosive to the eyes, skin, mucous membrane and digestive tract. Symptoms of skin and eye contact include redness, itching, swelling and burning. Permanent tissue and eye damage is possible. Cyclohexylamine is toxic in contact with the skin. The chemical is readily absorbed through the skin and may cause allergic skin reactions. Ingestion of Cyclohexylamine may result in convulsions and burning or ulceration of the digestive tract. Inhalation of Cyclohexylamine vapors may cause respiratory tract irritation with symptoms of coughing, burning, ulceration, pain, and central nervous system depression. Inhaling or ingesting sufficient quantities of the chemical may result in dizziness, drowsiness, anxiety or nausea.

Long-Term Health Effects

Long-term or repeated overexposure to Cyclohexylamine may result in allergic skin reactions, conjunctivitis, corneal damage or skin sensitization in susceptible individuals. Suspected of damaging fertility.

Physical Hazards

Cyclohexylamine is a flammable, corrosive liquid. A sudden reaction and fire or explosion may result on contact with strong oxidizing agents or reducing agents, and vapors may form explosive mixtures with air. Vapors are heavier than air and may travel long distances. Care must be taken to avoid contact with oxidizing materials. Exposure to heat, open flames and other potential sources of ignition must be avoided. Do not pressurize.

Potential Environmental Impact

Cyclohexylamine evaporates rapidly at ambient temperatures and is readily biodegradable. An accidental release (through spills or wastewater) may pose a danger to fish (high toxicity), invertebrates (high toxicity) and aquatic plants (high toxicity) prior to degradation. Cyclohexylamine is not expected to persist in the environment.

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

References

Integrated Risk Information System (IRIS), U.S. Environmental Protection Agency (EPA)

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

Safety Data Sheet (SDS), CYCLOHEXYLAMINE, LANXESS Corporation

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

NIOSH Pocket Guide to Chemical Hazards, Cyclohexylamine, National Institute for Occupational Safety and Health

Occupational Safety and Guideline for Cyclohexylamine, U.S. Department of Health and Human Services (HHS), Public Health Service and U.S. Department of Labor, Occupational Safety and Health Administration (OSHA)

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

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 conditions of your use and application of our products, technical assistance and information (whether verbal, written or by way of production evaluation(s)), 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 at least must include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by LANXESS. All information is given without warranty or guarantee. It is expressly understood and agreed that customer assumes and hereby expressly releases LANXESS from all liability, in tort, contract or otherwise, incurred in connection with the use of our products and information. Any statement or recommendation not contained herein is unauthorized and shall not bind LANXESS Corporation. Nothing herein shall be construed as a recommendation to use any product in violation of any patent covering any material or its use. No permission or license to use any patent is implied or in fact granted by this publication.