

Common Name: **CYCLOHEXYLAMINE**

Synonyms: 1-Aminocyclohexane; Hexahydroaniline; Cyclohexanamine

CAS No: 108-91-8

Molecular Formula: $C_6H_{13}N$

RTK Substance No: 0576

Description: Clear, colorless to yellow liquid with a strong, fishy odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
3 - Health 3 - Fire 0 - Reactivity DOT#: UN 2357 ERG Guide #: 132 Hazard Class: 8 (Corrosive)	FLAMMABLE LIQUID Use dry chemical, CO_2 , water spray or alcohol-resistant foam as extinguishing agents. Water may not be effective in fighting fires. POISONOUS GASES ARE PRODUCED IN FIRE , including <i>Nitrogen Oxides</i> and <i>Ammonia</i> . CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source or flash back. Cyclohexylamine may form an ignitable vapor/air mixture in closed tanks or containers.	Cyclohexylamine is a STRONG BASE that can react violently with OXIDIZING AGENTS (such as PERCHLORATES , PEROXIDES , PERMANGANATES , CHLORATES , NITRATES , CHLORINE , BROMINE and FLUORINE) and STRONG ACIDS (such as HYDROCHLORIC , SULFURIC and NITRIC). Cyclohexylamine will react with REDUCING AGENTS (such as LITHIUM , SODIUM , ALUMINUM and their HYDRIDES) to release flammable and explosive <i>Hydrogen gas</i> . Cyclohexylamine is not compatible with ISOCYANATES ; ORGANIC COMPOUNDS ; LEAD ; EPOXIDES ; ACID CHLORIDES ; and ACID ANHYDRIDES . Cyclohexylamine attacks ALUMINUM , COPPER and ZINC .

SPILL/LEAKS

Isolation Distance:

Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in dry sand, earth, or a similar material and place into sealed containers for disposal.

Use only non-sparking tools and equipment, especially when opening and closing containers of **Cyclohexylamine**.

Metal containers involving the transfer of **Cyclohexylamine** should be grounded and bonded.

Keep **Cyclohexylamine** out of confined spaces, such as sewers, because of the possibility of an explosion.

DO NOT wash into sewer.

Cyclohexylamine is harmful to aquatic organisms.

PHYSICAL PROPERTIES

Odor Threshold:	2.6 ppm
Flash Point:	88°F (31°C)
LEL:	1.5%
UEL:	9.4%
Auto Ignition Temp:	560°F (293°C)
Vapor Density:	3.42 (air = 1)
Vapor Pressure:	11 mm Hg at 68°F (20°C)
Specific Gravity:	0.865 (water = 1)
Water Solubility:	Very soluble
Boiling Point:	274°F (134°C)
Freezing Point:	0.1°F (-17.7°C)
pH:	11.5
Ionization Potential:	8.37 eV
Molecular Weight:	99.2

EXPOSURE LIMITS

OSHA: None

NIOSH: 10 ppm, 10-hr TWA

ACGIH: 10 ppm, 8-hr TWA

IDLH: None

The Protective Action Criteria values are:

PAC-1 = 1.8 ppm PAC-2 = 8.6 ppm PAC-3 = 30 ppm

PROTECTIVE EQUIPMENT

Gloves:	SilverShield®/4H® and Barrier® (>4-hr breakthrough for <i>Amines, aliphatic and alicyclic</i>)
Coveralls:	Tychem® BR, Responder® and TK (>8-hr breakthrough for <i>Amines, aliphatic and alicyclic</i>) >10% of the LEL use flash protection or turnout gear
Respirator:	>10 ppm - full facepiece APR with <i>Organic vapor cartridges</i> >30 ppm - SCBA

HEALTH EFFECTS

Eyes: Severe irritation, burns and possible eye damage

Skin: Irritation and burns

Inhalation: Nose and throat irritation with coughing and wheezing
Headache, dizziness, lightheadedness, anxiety and passing out

FIRST AID AND DECONTAMINATION

Remove the person from exposure.

Flush eyes with large amounts of water for at least 30 minutes. Remove contact lenses if worn. Seek medical attention.

Quickly remove contaminated clothing and wash contaminated skin with large amounts of water. Seek medical attention.

Begin artificial respiration if breathing has stopped and CPR if necessary.

Transfer promptly to a medical facility.