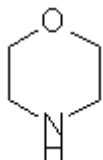


# Morpholine

Technical Data Sheet  
July 2009

 **BASF**  
The Chemical Company

Formula.....  $C_2H_7NO$   
Molecular Weight ..... 87.1  
PRD Number ..... 30036734  
CAS Registry Number ..... 110-91-8



Product Specifications	Value	Test Method
Assay, % minimum	99.0	GC
Water, % maximum	0.30	DIN 51 777
Color, APHA maximum	20	DIN EN 1557
Foreign matter	None	STI 8412

## Physical Properties

Freezing point, °C .....	-5
Flash point, °C.....	32
Boiling point °C.....	128-130
Density @ 20°C, g/cm <sup>3</sup> .....	1.016
Ignition temperature °C .....	275

## Description

Morpholine is a colorless to yellow liquid with a perceptible amine-like odor. It is miscible with water.

## Synonyms

Tetrahydro-1,4-oxazine

## Safety

Morpholine is irritating to skin, and harmful if swallowed. There is risk to serious damage to eyes and to health if prolonged exposure. It is also flammable. Wear protective clothing, gloves, and eye/face protection.

Always refer to the Material Safety Data Sheet (MSDS) for detailed information on safety.

## Applications

Intermediate used in the production of:

- Corrosion inhibitor
- Crop protection agents
- Dyes
- Optical brighteners
- Pharmaceuticals
- Rubber chemicals

## Packaging

This product is available in bulk and drums.

## Storage & Handling

Morpholine has a shelf life of 24 months. It must be protected from fire, explosions, sources of ignition and electrostatic charges, acids and acid forming substances. Ensure thorough ventilation of work and storage area.

Always refer to the Material Safety Data Sheet (MSDS) for detailed information on handling and disposal.

Although all statements and information in this publication are believed to be accurate and reliable, they are presented gratis and for guidance only, and risks and liability for results obtained by use of the products or application of the suggestions described are assumed by the user. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH. Statements or suggestions concerning possible use of the products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that toxicity data and safety measures are indicated or that other measures may not be required.

© 2009 BASF Corporation

## Contact us:

E-mail: [chemical\\_intermediates@basf-corp.com](mailto:chemical_intermediates@basf-corp.com)  
Website: [www.basf.com/usa/intermediates](http://www.basf.com/usa/intermediates)