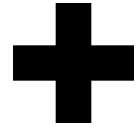




UNION CARBIDE CORPORATION  
A Subsidiary of The Dow Chemical Company  
**MATERIAL SAFETY DATA SHEET**



**Product Name:** CORROSION INHIBITOR CONCENTRATE      **Effective Date:** 08/18/2000  
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Union Carbide urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material of the information in this MSDS and any other information regarding hazards or safety; 2) Furnish this same information to each of its customers for the product; and 3) Request its customers to notify their employees, customers, and other users of the product of this information.

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**1.1 IDENTIFICATION**

<b>Product Name</b>	CORROSION INHIBITOR CONCENTRATE NN
<b>Chemical Name</b>	Mixture
<b>Chemical Family</b>	Corrosion Inhibitor
<b>Formula</b>	Mixture
<b>Synonym</b>	None

**1.2 COMPANY IDENTIFICATION**

Union Carbide Corporation  
A Subsidiary of The Dow Chemical Company  
39 Old Ridgebury Road  
Danbury, CT 06817-0001

**1.3 EMERGENCY TELEPHONE NUMBER**

**24 hours a day: CHEMTREC 1-800-424-9300.**  
Number for non-emergency questions concerning MSDS (732) 563-5522  
Additional information on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-568-4000.

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## 2. COMPOSITION INFORMATION

<u>Component</u>	<u>CAS #</u>	<u>Amount (%W/W)</u>
Water	7732-18-5	< 90%
Trade Secret Carboxylic Acid	Trade Secret	< 7%
Trade Secret Carboxylic Acid		< 7%
Trade Secret Metal Hydroxide		< 5%
Additives	Not available	< 3%

## 3. HAZARDS IDENTIFICATION

### 3.1 EMERGENCY OVERVIEW

**Appearance** Transparent amber

**Physical State** Liquid

**Odor** Mild

**Hazards of product** WARNING! NORMAL PRECAUTIONS SHOULD BE FOLLOWED IN HANDLING, STORAGE AND USE.

### 3.2 POTENTIAL HEALTH EFFECTS

#### Effects of Single Acute Overexposure

**Inhalation** Short-term harmful health effects are not expected from vapor generated at ambient temperature.

**Eye Contact** No evidence of harmful effects from available information.

**Skin Contact** No evidence of harmful effects from available information.

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**Skin Absorption** No evidence of harmful effects from available information.

**Swallowing** No evidence of harmful effects from available information.

## Chronic, Prolonged or Repeated Overexposure

**Effects of Repeated Overexposure** No adverse effects anticipated from available information.

**Other Effects of Overexposure** None currently known.

## Medical Conditions Aggravated by Exposure

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure is unlikely to aggravate existing medical conditions.

## **3.3 POTENTIAL ENVIRONMENTAL EFFECTS**

See Section 12 for Ecological Information.

## **4. FIRST AID PROCEDURES**

### **4.1 INHALATION**

Remove to fresh air.

### **4.2 EYE CONTACT**

Flush eyes thoroughly with water for several minutes. Remove contact lenses, if worn.

### **4.3 SKIN CONTACT**

Wash skin with soap and water.

### **4.4 SWALLOWING**

No emergency care anticipated.

### **4.5 NOTES TO PHYSICIAN**

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

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## **5. FIRE FIGHTING MEASURES**

### **5.1 FLAMMABLE PROPERTIES**

**Flash Point - Closed Cup:** None.

**Flash Point - Open Cup:** None.

**Autoignition Temperature:** *Not currently available.*

#### **Flammable Limits In Air:**

Lower	<i>Not Determined, Aqueous System</i>
Upper	<i>Not Determined, Aqueous System</i>

### **5.2 EXTINGUISHING MEDIA**

Non-flammable (aqueous solution): After water evaporates, remaining material will burn. Use alcohol-type or all-purpose-type foam, applied by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.

### **5.3 EXTINGUISHING MEDIA TO AVOID**

No information currently available.

### **5.4 SPECIAL FIRE FIGHTING PROCEDURES**

Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.

### **5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS**

Use self-contained breathing apparatus and protective clothing.

### **5.6 UNUSUAL FIRE AND EXPLOSION HAZARDS**

During a fire, oxides of nitrogen may be produced.

### **5.7 HAZARDOUS COMBUSTION PRODUCTS**

Combustion may produce the following products: Oxides of carbon and nitrogen. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

## **6. ACCIDENTAL RELEASE MEASURES**

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## **Steps to be Taken if Material is Released or Spilled:**

Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.

**Personal Precautions:** Wear suitable protective equipment. See Section 8.2 - Personal Protection.

## **7. HANDLING AND STORAGE**

### **7.1 HANDLING**

#### **General Handling**

Keep container closed.  
Use with adequate ventilation.  
Wash thoroughly after handling.

FOR INDUSTRY USE ONLY.

#### **Ventilation**

General (mechanical) room ventilation is satisfactory for use at low temperatures. If used at high temperatures, special local ventilation is recommended at points where vapors can be expected to escape to the workplace air.

### **7.2 STORAGE**

Store in accordance with good industrial practices. Storage information may be obtained from product-specific Union Carbide Storage and Handling Guides, or by calling a Union Carbide Customer Service Representative.

## **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **8.1 EXPOSURE LIMITS**

<b>Component</b>	<b>Exposure Limits</b>	<b>Skin Form</b>
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*In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.*

*A "Yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substance. A "Blank" in the Skin Column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.*

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## 8.2 PERSONAL PROTECTION

**Respiratory Protection:**      None expected to be needed at low temperatures.

**Ventilation:**      General (mechanical) room ventilation is satisfactory for use at low temperatures. If used at high temperatures, special local ventilation is recommended at points where vapors can be expected to escape to the workplace air.

**Eye Protection:**      Safety Glasses

**Protective Gloves:**      Polyvinyl chloride coated

**Other Protective Equipment:**      Eye Bath, Safety Shower  
Chemical apron

## 8.3 ENGINEERING CONTROLS

Use good housekeeping and acceptable industrial engineering practices.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:**      Liquid

**Appearance:**      Transparent amber

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**pH:** *Not currently available.*

**Solubility in Water (by weight):** 100 %

**Odor:** Mild

**Boiling Point (760 mmHg):** 101.7 °C 215.1 °F

**Freezing Point:** -2.4 °C 27.4 °F

**Specific Gravity (H<sub>2</sub>O = 1):** 1.062 20 °C / 20 °C

**Vapor Pressure at 20°C:** 1.9 kPa 14 mmHg

**Vapor Density (air = 1):** 0.71

**Evaporation Rate (Butyl Acetate = 1):** 0.74

**Melting Point:** *Not determined.*

### 10. STABILITY AND REACTIVITY

**10.1 STABILITY/INSTABILITY** Stable

#### 10.2 HAZARDOUS POLYMERIZATION

Will Not Occur.

**10.3 INHIBITORS/STABILIZERS** Not applicable.

### 11. TOXICOLOGICAL INFORMATION

#### SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

None currently known.

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## **12. ECOLOGICAL INFORMATION**

### **12.1 ENVIRONMENTAL FATE**

Information may be available, call Union Carbide.

### **12.2 ECOTOXICITY**

Information may be available, call Union Carbide.

#### **Toxicity to Micro-organisms**

Bacterial/NA; IC50

**Result value:** > 500 mg/l

### **12.3 FURTHER INFORMATION**

None.

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 WASTE DISPOSAL METHOD**

Incinerate in a furnace or otherwise dispose of in accordance with applicable Federal, State and local requirements. Dispose in accordance with all applicable Federal, State, and local environmental regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

### **13.2 DISPOSAL CONSIDERATIONS**

See Section 13.1

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*Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules, regulations and/or laws governing your location.*

## **14. TRANSPORT INFORMATION**

### **14.1 U.S. D.O.T.**

#### **NON-BULK**

**Proper Shipping Name :** NOT REGULATED

#### **BULK**

**Proper Shipping Name :** NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

## **15. REGULATORY INFORMATION**

### **15.1 FEDERAL/NATIONAL**

#### **COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 SECTION 103 (CERCLA)**

The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are not identified) and are present at levels which could require reporting:

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Trade Secret Metal Hydroxide		<= 5.0000%

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#### **SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EPCRA) SECTIONS 302 AND 304**

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The following components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning:

None.

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## SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EPCRA) SECTION 313

The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372:

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Trade Secret Metal Hydroxide		<= 5.0000%

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## SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 TITLE III (EPCRA) SECTIONS 311 AND 312

**Delayed Hazard :** No  
**Fire Hazard :** No  
**Immediate Health Hazard :** No  
**Reactive Hazard :** No  
**Sudden Release of Pressure Hazard :** No

## TOXIC SUBSTANCES CONTROL ACT (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

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## 15.2 STATE/LOCAL

### PENNSYLVANIA (WORKER AND COMMUNITY RIGHT-TO-KNOW ACT)

This product is subject to the Worker and Community Right-to-Know Act. The following components of this product are at levels which could require identification in the MSDS:

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Trade Secret Metal Hydroxide		<= 5.0000%

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## MASSACHUSETTS (HAZARDOUS SUBSTANCES DISCLOSURE BY EMPLOYERS)

The following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS:

<b>Component</b>	<b>CAS #</b>	<b>Amount</b>
Trade Secret Metal Hydroxide		<= 5.0000%

Massachusetts Trade Secret Code No. = 99-206-032.

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## CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

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## CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 443.1, LABELING OF MATERIALS CONTAINING ORGANIC SOLVENTS)

**VOC:** Not determined.

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*This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.*

## **16. OTHER INFORMATION**

### **16.1 AVAILABLE LITERATURE AND BROCHURES**

**ADDITIONAL INFORMATION:** Additional product safety information on this product may be obtained by calling your Union Carbide Corporation Sales or Customer Service contact.

Ask for the brochure:

UCON Fluids and Lubricants (Family Brochure). Ask about the availability of specific product and end-use bulletins.

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## 16.2 SPECIFIC HAZARD RATING SYSTEM

Additional information on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-568-4000.

## 16.3 RECOMMENDED USES AND RESTRICTIONS

FOR INDUSTRY USE ONLY

## 16.4 REVISION

Version: 2.0

Revision: 08/18/2000

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

## 16.5 LEGEND

A	Asphyxiant
Bacterial/NA	Non Acclimated Bacteria
F	Fire
H	Health
HMIS	Hazardous Materials Information System
N/A	Not available
NFPA	National Fire Protection Association
O	Oxidizer
P	Peroxide Former
R	Reactivity
TS	Trade Secret
VOL/VOL	Volume/Volume
W	Water Reactive
W/W	Weight/Weight

*The opinions expressed herein are those of qualified experts within Union Carbide. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of the use of the product are not under the control of Union Carbide, it is the user's obligation to determine conditions of safe use of the product.*