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

Product Name: GLUTARALDEHYDE 50%
Chemical Name: Glutaraldehyde, 50% Aqueous Solution
Chemical Family: Aldehydes
Formula: OHCC3H6CHO
Synonym: Glutaral, Glutaric Dialdehyde

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.
2. COMPOSITION INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount (%W/W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glutaraldehyde</td>
<td>111-30-8</td>
<td>50%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&lt;= 50%</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&lt;= 0.5%</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Appearance: Transparent colorless

Physical State: Liquid

Odor: Sharp, Fruity, Medicinal

Hazardous to product: DANGER! CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE. CAUSES SKIN BURNS. HARMFUL IF INHALED. MAY BE FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTIONS IN SOME INDIVIDUALS. CAUSES ASTHMATIC SIGNS AND SYMPTOMS IN HYPER-REACTIVE INDIVIDUALS. ASPIRATION MAY CAUSE LUNG DAMAGE.

3.2 POTENTIAL HEALTH EFFECTS
Effects of Single Acute Overexposure

**Inhalation**  Vapor is irritating to the respiratory tract, causing stinging sensations in the nose and throat, discharge from the nose, possibly bleeding from the nose, coughing, chest discomfort and tightness, difficulty with breathing, and headache. Heating the solution may result in more severe irritant effects.

**Eye Contact**  Liquid will cause a severe and persistent conjunctivitis, seen as excess redness and marked swelling of the conjunctiva with profuse discharge. Severe corneal injury may develop, which could permanently impair vision if prompt first-aid and medical treatment are not obtained. Vapor will cause stinging sensations in the eye with excess tear production, blinking, and possibly a slight excess redness of the conjunctiva.

**Skin Contact**  Brief contact will cause itching with mild to moderate local redness and possibly swelling. Prolonged contact may result in pain, severe redness and swelling, with ulceration, tissue destruction, and possibly bleeding into the inflamed area. Contact with solutions of glutaraldehyde may cause a harmless yellow or brownish discoloration of the skin.

**Skin Absorption**  Prolonged or widespread contact may result in the absorption of potentially harmful amounts of material.

**Swallowing**  Moderately toxic. May cause moderate to marked irritation and possibly chemical burns of the mouth, throat, esophagus, and stomach. There will be discomfort or pain in the chest and abdomen, nausea, vomiting, diarrhea, dizziness, faintness, drowsiness, thirst, weakness, circulatory shock, collapse and coma. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

**Chronic, Prolonged or Repeated Overexposure**

**Effects of Repeated Overexposure**  Repeated skin contact may cause a cumulative dermatitis.

**Other Effects of Overexposure**  May cause skin sensitization in a small portion of individuals and present as an allergic contact dermatitis. This usually results from contact with the liquid, but occasionally there may be a reaction to glutaraldehyde vapor. May cause asthma, particularly in those with an increased tendency to develop allergic reactions to common environmental allergens (i.e., atopic individuals).

**Medical Conditions Aggravated by Exposure**

Skin contact may aggravate an existing dermatitis. Inhalation of material may aggravate asthma and inflammatory or fibrotic pulmonary disease.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

See Section 12 for Ecological Information.

4. FIRST AID PROCEDURES
4.1 INHALATION
Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

4.2 EYE CONTACT
Immediately flush eyes with water and continue washing for at least 15 minutes. DO NOT remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

4.3 SKIN CONTACT
Immediately remove contaminated clothing and shoes. Wash skin with soap and water. Obtain medical attention. Wash clothing before reuse. Discard contaminated leather articles such as shoes and belt.

4.4 SWALLOWING
DO NOT INDUCE VOMITING. Do not give anything to drink. Obtain medical attention without delay.

4.5 NOTES TO PHYSICIAN
The hazards of this material are due mainly to its severely irritant properties on skin and mucosal surfaces.
Moderately toxic by swallowing.
Moderately toxic by absorption across the skin.
Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications. Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g., gastric lavage after endotracheal intubation).

5. FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point - Closed Cup: Tag Closed Cup ASTM D 56 None.
Flash Point - Open Cup: Tag Open Cup ASTM D 1310 None.
Autoignition Temperature: None.

Flammable Limits In Air:
Lower Not Determined, Aqueous System
Upper Not Determined, Aqueous System

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
No information currently available.

5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Use self-contained breathing apparatus and protective clothing.

5.6 UNUSUAL FIRE AND EXPLOSION HAZARDS
None known.

5.7 HAZARDOUS COMBUSTION PRODUCTS
Burning can produce the following products: Carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant.

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled:
Very low concentrations (5 ppm or less of glutaraldehyde) can be degraded in a biological wastewater treatment system. Thus, small spills can be flushed with large quantities of water. Large quantities or 'slugs' can be harmful to the treatment system. Thus, large spills should be collected for disposal. It may also be possible to decontaminate spilled material by careful application of aqueous sodium hydroxide or sodium bisulfite. Depending on conditions, considerable heat and fumes can be liberated by the decontamination reaction.

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

Environmental Precautions: Toxic to fish; avoid discharge to natural waters.
7. HANDLING AND STORAGE

7.1 HANDLING

General Handling
Do not get in eyes, on skin, on clothing.
Avoid breathing vapor.
Do not swallow.
Wear goggles, protective clothing and gloves.
Wash thoroughly with soap and water after handling.
Remove contaminated clothing and wash before reuse.

FOR INDUSTRY USE ONLY.

Ventilation
General (mechanical) room ventilation is expected to be satisfactory if this material is kept in covered equipment or if the solution is highly diluted. However, if vapors are strong enough to be irritating to the nose (or eyes), the TLV is probably being exceeded and special ventilation and/or respiratory protection may be required.

Other Precautions
This product in its undiluted form must not be used in a spray or aerosol application. If dilutions or mixtures of this product are used in a spray application, full personal protective equipment is strongly recommended to prevent exposure. CAUTION! PLASTIC CONTAINER, IF PRESENT, MAY CAUSE STATIC IGNITION HAZARD. Do not handle or empty container in the presence of flammable vapors.

7.2 STORAGE

Please refer to Union Carbide Corporation publication: GLUTARALDEHYDE. Safe Handling and Storage Guide; UC-1255.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure Limits</th>
<th>Skin Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glutaraldehyde</td>
<td>0.05 ppm CEILING ACGIH</td>
<td>activated and unactivated</td>
</tr>
<tr>
<td></td>
<td>0.2 ppm CEILING OSHA-Vacated</td>
<td></td>
</tr>
</tbody>
</table>
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.

### 8.2 PERSONAL PROTECTION

**Respiratory Protection:** Use self-contained breathing apparatus in high vapor concentrations. If self-contained breathing apparatus is not available, a MSHA/NIOSH approved air purifying respirator equipped with an organic vapor cartridge should be used.

**Ventilation:** General (mechanical) room ventilation is expected to be satisfactory if this material is kept in covered equipment or if the solution is highly diluted. However, if vapors are strong enough to be irritating to the nose (or eyes), the TLV is probably being exceeded and special ventilation and/or respiratory protection may be required.

**Eye Protection:** Splash proof monogoggles or safety glasses with side shields in conjunction with a face shield.

**Protective Gloves:** Nitrile (NBR) Butyl
8.3 ENGINEERING CONTROLS

Use good housekeeping and acceptable industrial engineering practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: Transparent colorless

pH: 3.1 - 4.5

Solubility in Water (by weight): 20 °C 100 %

Odor: Sharp, Fruity, Medicinal

Molecular Weight: 100.11 g/mol

Boiling Point (760 mmHg): ~ 100.5 °C ~ 213 °F As product.

Freezing Point: ~ -21 °C ~ -6 °F

Specific Gravity (H2O = 1): 1.129 20 °C / 20 °C

Vapor Pressure at 20°C: 2.67 kPa Based on glutaraldehyde 0.20 mmHg

Vapor Density (air = 1): 1.1

Evaporation Rate (Butyl Acetate = 1): 1.0

Melting Point: Not applicable.

10. STABILITY AND REACTIVITY
10.1 STABILITY/INSTABILITY  Stable

Conditions to Avoid:  Avoid high temperature and evaporation of water.

Incompatible Materials:  Strong alkalies and acids catalyze an aldol-type condensation (exothermic, but not expected to be violent).

10.2 HAZARDOUS POLYMERIZATION  Will Not Occur.

Conditions to Avoid:  Temperatures above 100°C.  Although polymerization may occur, it is not hazardous.

10.3 INHIBITORS/STABILIZERS  Not applicable.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Peroral

This information is based on peroral dosing of 50% glutaraldehyde without further dilution. Oral toxicity has been shown to increase upon dilution.

Rat; male; LD50 = 1.30  (0.87 - 1.94) ml/kg

Major Signs:  sluggishness, piloerection, labored breathing, hunched posture, prostration, weight loss

Gross Pathology:  distended stomach and intestines, discoloration of liver, spleen, kidneys, adrenals, thickening and hemorrhaging of pylorus

Percutaneous

Rabbit; LD50 = 2.54  (1.46 - 4.41) ml/kg; 24 h occluded.

Major Signs:  necrosis at application site

Gross Pathology:  lungs, liver, spleen, kidneys discolored

Inhalation
dynamic generation of vapor  Rat; male and female; 4 hour = 16.3 ppm; Room temperature

Mortality: 0/5

Major Signs: blepharospasm, periocular wetness, audible respiration

Gross Pathology: None.

Inhalation

static generation of substantially saturated vapor  Rat; male and female; 4 hour; 20 °C.

Mortality: 0/5

Major Signs: blepharospasm

Gross Pathology: None.

Inhalation

Aerosol Studies; 4 hour; LC50 = 0.48  (0.41 - 0.59) mg/l

Major Signs: heavy or irregular breathing, nasal discharge, gasping, nasal encrustation

Gross Pathology: lungs discolored

IRRITATION

Skin: Rabbit; 4 h covered
Results: 2/6 with necrosis
Skin: Rabbit; 1 h occluded
Results: minor to severe erythema and edema with necrosis, scabbing, desquamation, and alopecia
Skin: Rabbit; 3 min occluded
Results: minor erythema

Eye: Rabbit; 0.005 ml
Results: severe corneal injury, iritis, swelling and necrosis of eyelid

Eye: Rabbit; 0.5 ml; 5% solution in water
Results: severe corneal injury, iritis, swelling and necrosis of eyelid

Eye: Rabbit; 0.5 ml; 1% solution in water
Results: trace corneal injury
SENSITIZATION (ANIMAL AND HUMAN STUDIES)
Guinea Pig Maximization Test: intradermal injection of a 0.1% glutaraldehyde solution and topical administration of a 5% solution. Evidence of delayed contact hypersensitivity in 68% of test animals upon challenge.

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS
Studies in humans have shown that glutaraldehyde is neither phototoxic nor a photosensitizer. Subchronic drinking water studies in rats, mice and dogs using concentrations up to 1000 ppm showed no evidence for any target organ toxicity. In vitro studies for genetic toxicology using a variety of assays [bacterial mutagenicity, forward gene mutation (HGPRT and TK loci), sister chromatid exchanges, chromosome aberrations UDS, and DNA repair] have given variable results, ranging from negative to weak positive. In vivo genetic toxicology studies have generally shown no activity (micronucleus, some chromosome aberration tests, dominant lethal, and Drosophila), although one mouse bone marrow study showed increased chromosomal aberrations following intraperitoneal dosing, but this was not seen in the rat after oral dosing.

Several developmental toxicity studies have demonstrated that at maternally nontoxic doses, glutaraldehyde does not produce fetotoxic, embryotoxic or teratogenic effects. In a two-generation reproduction study involving continuous exposure of CD rats to glutaraldehyde up to 1000 ppm, in drinking water there were effects on parental body weight and food consumption at 1000 ppm (due to an aversion to the taste), but no adverse effects on reproductive performance. In a chronic (2-year) continuous drinking water combined chronic toxicity-oncogenicity study using Fischer 344 rats, there was no evidence for non-oncogenic target organ toxicity. The only possible oncogenicity-related finding was an increase in the incidence of large granular cell does not represent direct chemical carcinogenic activity but, rather, a modifying influence on the expression of this spontaneous and commonly occurring neoplasms in the Fischer 344 rat. Repeated applications of aqueous solutions of glutaraldehyde to the rat skin for 20 dosages over a 28-day period at 50, 100 or 150 mg/kg/day produced mild local inflammatory effects, but no evidence for target organ or tissue systemic toxicity. Under the auspices of the National Toxicology Program a chronic study with glutaraldehyde vapor was conducted in rats (0, 250, 500 and 750 ppb) and mice (0, 62.5, 125 and 250 ppb). Animals were exposed for 6 hr/day, 5 days/week for 104 weeks. Under these conditions there were no significant increases in any tumor types, and glutaraldehyde was not carcinogenic.

An extensive clinical survey has been conducted on nursing staff in 59 endoscopy units (340 currently employed workers and 18 former employees); investigational procedures included detailed questionnaire, sensitization to common allergens, blood for IgE measurements, lung function tests, peak flow diaries, and measurement of workplace glutaraldehyde vapor concentrations. About two-thirds of current employees had ocular, nasal, or lower respiratory tract symptoms, but these were more prevalent for non-work conditions. The only effect correlated with glutaraldehyde exposure was nasal irritation. There was a slight, but no statistically or biologically significant, decrease in FEV1 for those with lower respiratory tract symptoms. There were no indications of asthma and no objective evidence for respiratory sensitization.
12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL FATE

Please refer to Union Carbide publication: Summary of Environmental Fate Data on Glutaraldehyde; BB-TL-2079.

12.2 ECOTOXICITY

Please refer to Union Carbide publication: Summary of Fish and Wildlife Toxicological Studies on Glutaraldehyde; BB-TL-2080.

12.3 FURTHER INFORMATION

None.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHOD

Atomize into a very hot incinerator fire or mix with a suitable flammable solvent, and incinerate where permitted under appropriate Federal, State, and local regulations. High water content may dampen flame. 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

*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: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS
Technical Name: CONTAINS GLUTARALDEHYDE
Hazard Class: 8
ID Number: UN3265
Packing Group: PG II

BULK

Proper Shipping Name: CORROSIVE LIQUID, ACIDIC, ORGANIC, NOS
Technical Name: CONTAINS GLUTARALDEHYDE
Hazard Class: 8
ID Number: UN3265
Packing Group: PG II

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:

None.

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

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.
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:

This product does not contain toxic chemicals at levels which require reporting under the statute.

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

Delayed (Chronic) Health Hazard : Yes
Fire Hazard : No
Immediate (Acute) Health Hazard : Yes
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.

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS)

The components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

CEPA - DOMESTIC SUBSTANCES LIST (DSL)

The components of this product are on the DSL or are exempt from reporting under the New Substances Notification Regulations.

15.2 STATE/LOCAL
MATERIAL SAFETY DATA SHEET

Product Name: GLUTARALDEHYDE 50%  Effective Date: 02/20/2001
MSDS#: 1078  Page 15 of 15

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glutaraldehyde</td>
<td>111-30-8</td>
<td>&lt;= 50.0000%</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glutaraldehyde</td>
<td>111-30-8</td>
<td>&lt;= 50.0000%</td>
</tr>
</tbody>
</table>

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.

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents)

VOC: Not applicable.

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 on this product may be obtained by calling the Union Carbide Corporation Customer Service Center at 1-800-568-4000.
16.2 SPECIFIC HAZARD RATING SYSTEM

HMIS ratings for this product are: H - 3  F - 1  R - 0

NFPA ratings for this product are: H - 3  F - 1  R - 0

These ratings are part of specific hazard communications program(s) and should be disregarded where individuals are not trained in the use of these hazard rating systems. You should be familiar with the hazard communication applicable to your workplace.

16.3 RECOMMENDED USES AND RESTRICTIONS

This product in its undiluted form must not be used in a spray or aerosol application. If dilutions or mixtures of this product are used in a spray application, full personal protective equipment is strongly recommended to prevent exposure.

FOR INDUSTRY USE ONLY.

16.4 REVISION

Version: 4.1
Revision: 02/20/2001
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.