



-----  
HAZARDS IDENTIFICATION  
-----

## # Potential Health Effects

Inhalation of Glycolic Acid may cause irritation of mucous membranes with upper respiratory and bronchial irritation.

Skin contact with Glycolic Acid may cause severe skin irritation with discomfort or rash. Higher or prolonged exposure may cause skin burns or ulceration.

Eye contact with Glycolic Acid may cause eye corrosion with corneal or conjunctival ulceration. Permanent eye damage can occur.

Ingestion of Glycolic Acid may cause corrosion of mucous membranes with stomach discomfort, nausea, and prostration. Kidney damage or fatality may occur from gross overexposure.

## Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

-----  
FIRST AID MEASURES  
-----

## First Aid

## EYE CONTACT

Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

## SKIN CONTACT

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash clothing before reuse.

## INHALATION

Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

## INGESTION

Do not induce vomiting. Give large quantities of water. Call a physician. Never give anything by mouth to an unconscious person.

-----  
FIRE FIGHTING MEASURES  
-----

## Flammable Properties

Will not burn.

## Fire and Explosion Hazards:

Contact with active metals may produce flammable hydrogen gas.

## Extinguishing Media

As appropriate for combustibles in area.

## Fire Fighting Instructions

None.

-----  
ACCIDENTAL RELEASE MEASURES  
-----

## Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

## Accidental Release Measures

Neutralize spills with lime or soda ash. Flush spill area with plenty of water.

If GLYCOLIC ACID - 70% SOLUTION is spilled and not recovered, or is recovered as a waste for treatment or disposal, the CERCLA Reportable Quantity is 100 lbs. (Release of an unlisted Hazardous Waste Characteristic of Corrosivity).

-----  
HANDLING AND STORAGE  
-----

## Handling (Personnel)

Avoid breathing mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.

## Storage

Keep in a well-ventilated area. Protect bulk storage area from sparks and flame. Keep packages tightly closed. Store above 10 deg C (50 deg F) melting point.

-----  
EXPOSURE CONTROLS/PERSONAL PROTECTION  
-----

## Engineering Controls

Good general ventilation should be provided to keep mist concentrations below the recommended exposure limit.

## Personal Protective Equipment

Chemical splash goggles and rubber gloves. Wear a butyl rubber acid suit and NIOSH permissible respiratory protection if there is a reasonable possibility for exposure.

## Exposure Guidelines

## Exposure Limits

GLYCOLIC ACID - 70% TECHNICAL SOLUTION  
PEL (OSHA) : None Established  
TLV (ACGIH) : None Established  
AEL \* (DuPont) : 10 mg/m3, 8 & 12 Hr. TWA

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

-----  
PHYSICAL AND CHEMICAL PROPERTIES  
-----

## Physical Data

Boiling Point : 112 C (234 F) @ 760 mm Hg  
Vapor Pressure : Vapor is water  
Vapor Density : Vapor is water  
Melting Point : 10 C (50 F) (Precipitates)  
Solubility in Water : Miscible  
pH : 0.1 @ 25 deg C (77 deg F)  
Odor : Mild (like burnt sugar)  
Form : Clear liquid  
Color : Light amber  
Density : 1.25 g/cc at 26 deg C (79 deg F)

-----  
STABILITY AND REACTIVITY  
-----

## Chemical Stability

Stable.

## Incompatibility with Other Materials

Reacts with active metals (like sodium), oxidizing agents (such as strong nitric acid), cyanide salts or sulfide salts to produce hydrogen, oxides of nitrogen, hydrogen cyanide or hydrogen sulfide gases, respectively.

## (STABILITY AND REACTIVITY - Continued)

## Decomposition

Decomposition will not occur.

## Polymerization

Polymerization will not occur.

-----  
TOXICOLOGICAL INFORMATION  
-----

## # Animal Data

## Glycolic Acid:

Inhalation 4 hour LC50: 3.6 mg/L in male rats  
Inhalation 4 hour LC50: , > 5.2 mg/L in female rats  
Oral LD50: 1938 mg/kg in rats

70% Glycolic Acid is a skin and eye corrosive. Glycolic Acid is not a skin sensitizer in animals.

Toxic effects described in animals from single exposure to Glycolic Acid by inhalation include body weight losses and ocular and nasal discharges. Histopathological changes observed include laryngeal ulceration, nasal lesions, and lung inflammation. Repeated exposures produced liver, spleen, thymus, and gastrointestinal tract effects. Administration of single high oral doses of Glycolic Acid produced gastrointestinal tract irritation, liver damage, increased kidney weights, and the formation of calcium oxalate crystals in the kidneys. Repeated oral doses in cats produced mortality, weight and appetite loss, depression, vomiting, coma, convulsions, and kidney failure. Dogs given similar and higher doses exhibited no toxic effects. Repeated oral dosing in rats resulted in excessive mortality, decreased body weight, and hematologic and clinical chemistry changes. The primary target organ of toxicity was the kidney. Both organ weight and microscopic changes were seen in kidneys of male rats. No systemic toxicity occurred in female rats. There was no evidence of neurotoxic or immunologic effects with Glycolic Acid from this test.

No animal test reports are available to define carcinogenic hazards. At high dietary levels in animals developmental toxicity occurred only at exposure levels producing other toxic effects in the adult animal. Glycolic Acid is not considered a unique developmental hazard to the conceptus. The compound does not produce genetic damage in bacterial cell cultures. It has not produced genetic damage in tests on animals. There was no evidence of reproductive effects in rats.

-----  
ECOLOGICAL INFORMATION  
-----

## # Ecotoxicological Information

24-48 hour LC50, Bluegill sunfish: 93 mg/L  
96 hour LC50, Fathead minnow: 164 mg/L  
48 hour EC50, Daphnia magna: 141 mg/L

These data indicate that glycolic acid has slight aquatic toxicity.

Biodegradability - Readily biodegradable after 7 days, 89.6% is biodegraded (closed bottle test).

-----  
DISPOSAL CONSIDERATIONS  
-----

## Waste Disposal

Comply with Federal, State, and local regulations. If approved, may be neutralized with lime or soda ash and flushed to wastewater treatment system. This material may be a RCRA hazardous waste due to its corrosive characteristic (pH).

-----  
TRANSPORTATION INFORMATION  
-----

## Shipping Information

DOT/IMO  
Proper Shipping Name : CORROSIVE LIQUIDS, ACIDIC, ORGANIC,  
N.O.S.  
(GLYCOLIC ACID)  
Hazard Class : 8  
UN No. : 3265  
DOT/IMO Label : CORROSIVE  
Packing Group : II

## Shipping Containers

Tank Car  
Tank Truck  
Drums  
Sample Bottles

-----  
REGULATORY INFORMATION  
-----

## U.S. Federal Regulations

TSCA Inventory Status : Reported/Included.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : No  
Fire : No  
Reactivity : No  
Pressure : No

## LISTS:

SARA Extremely Hazardous Substance -No  
CERCLA Hazardous Substance -Yes\*  
SARA Toxic Chemical -No

\* SEE DISPOSAL SECTION.

## CANADIAN WHMIS CLASSIFICATION:

E

-----  
OTHER INFORMATION  
-----

## NFPA, NPCA-HMIS

NPCA-HMIS Rating  
Health : 3  
Flammability : 0  
Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

## Additional Information

DuPont prohibits the use of 70% Technical Solution grade glycolic acid in personal care applications due to the higher level of impurities.

For further information, see DuPont Glycolic Acid "Properties, Uses, Storage, and Handling" Bulletin.

-----  
The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.Responsible for MSDS : MSDS Coordinator  
> : DuPont Chemical Solutions Enterprise

(Continued)

Address : Wilmington, DE 19898  
Telephone : (800) 441-7515

# Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS