



Material Safety Data Sheet

Issue Date: 13-FEB-2008
Supersedes: 01-APR-2004

LIQUICLEAN 103

1 Identification of Product and Company

Identification of substance or preparation

LIQUICLEAN 103

Product Application Area

Membrane cleaner

Company/Undertaking Identification

GE Betz, Inc.
4636 Somerton Road
Trevose, PA 19053
T 215 355-3300, F 215 953 5524

Emergency Telephone

(800) 877-1940

Prepared by Product Stewardship Group: 215 355-3300

2 Composition / Information On Ingredients

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range (w/w%)
5064-31-3	NITRILOTRIACETIC ACID, TRISODIUM SALT (NTA.3NA) Possible human carcinogen (IARC=2B; NTP=anticipated)	0.1-1.0
139-89-9	N-HYDROXYETHYLENEDIAMINE TRIACETIC ACID TRISODIUM SALT Irritant (eyes)	15-40
79-14-1	GLYCOLIC ACID (HYDROXYACETIC ACID) Irritant (eyes and skin); may cause toxicity to the kidneys and/or reproductive system; fetotoxic and developmental toxin in laboratory animals	15-40
7664-38-2	PHOSPHORIC ACID Corrosive	7-13

3 Hazards Identification

EMERGENCY OVERVIEW

DANGER

Severe irritant to the skin. Severe irritant to the eyes, possibly corrosive. Mists/aerosols cause irritation to the upper respiratory tract.

DOT hazard is not applicable

Odor: Slight Acetic; Appearance: Colorless To Amber, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media: dry chemical, carbon dioxide, foam or water

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; Severe irritant to the skin.

ACUTE EYE EFFECTS:

Severe irritant to the eyes, possibly corrosive.

ACUTE RESPIRATORY EFFECTS:

Mists/aerosols cause irritation to the upper respiratory tract.

INGESTION EFFECTS:

May cause gastrointestinal irritation with possible nausea, vomiting, abdominal discomfort and diarrhea.

TARGET ORGANS:

Prolonged or repeated exposures may cause primary irritant dermatitis and/or toxicity to the kidney and reproductive system. Product or product component may increase risk of cancer.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

Causes irritation of the skin, eyes, and/or respiratory system.

4 First Aid Measures

SKIN CONTACT:

Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops or persists.

EYE CONTACT:

URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

INHALATION:

If nasal, throat or lung irritation develops - remove to fresh air and get medical attention.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive

victim. Do not induce vomiting. Immediately contact physician. Wash mouth with water. Do not give water to drink.

NOTES TO PHYSICIANS:

No special instructions

5 Fire Fighting Measures

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

dry chemical, carbon dioxide, foam or water

HAZARDOUS DECOMPOSITION PRODUCTS:

oxides of carbon, nitrogen and phosphorus

FLASH POINT:

> 200F > 93C P-M(CC)

6 Accidental Release Measures

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7 Handling & Storage

HANDLING:

Normal chemical handling.

STORAGE:

Keep containers closed when not in use. Do not freeze. If frozen, thaw and mix completely prior to use.

8 Exposure Controls / Personal Protection

EXPOSURE LIMITS

CHEMICAL NAME

NITRILOTRIACETIC ACID, TRISODIUM SALT (NTA.3NA)

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

N-HYDROXYETHYLENEDIAMINE TRIACETIC ACID TRISODIUM SALT

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

GLYCOLIC ACID (HYDROXYACETIC ACID)

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

MISC: Note- manufacturer's recommended exposure limit: 10 mg/m3.

PHOSPHORIC ACID

PEL (OSHA): 1 MG/M3

TLV (ACGIH): 1 MG/M3

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.

USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.

If air-purifying respirator use is appropriate, use a respirator with HEPA cartridges.

SKIN PROTECTION:

rubber, butyl, viton or neoprene gloves -- Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles

9 Physical & Chemical Properties

Specific Grav.(70F,21C)	1.350	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	-5	Vapor Density (air=1)	> 1.00
Freeze Point (C)	-21		
Viscosity(cps 70F,21C)	50	% Solubility (water)	100.0

Odor	Slight Acetic
Appearance	Colorless To Amber
Physical State	Liquid
Flash Point	P-M(CC) > 200F > 93C
pH As Is (approx.)	3.4
Evaporation Rate (Ether=1)	< 1.00
Percent VOC:	10.0

NA = not applicable ND = not determined

10 Stability & Reactivity

STABILITY:

Stable under normal storage conditions.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

May react with strong oxidizers.

DECOMPOSITION PRODUCTS:

oxides of carbon, nitrogen and phosphorus

INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"B"

11 Toxicological Information

Oral LD50 RAT: >2,000 mg/kg
NOTE - Estimated value
Dermal LD50 RABBIT: >2,000 mg/kg
NOTE - Estimated value
Reproductive Toxicity ANIMALS: Positive
NOTE - An ingredient has caused fetotoxicity and developmental effects

12 Ecological Information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 1890; No Effect Level= 1060 mg/L
Fathead Minnow 96 Hour Static Bioassay with 48-Hour Renewal (pH adjusted)
0% Mortality= 2000 mg/L

BIODEGRADATION

BOD-28 (mg/g): 105
BOD-5 (mg/g): 70
COD (mg/g): 335
TOC (mg/g): 150

13 Disposal Considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
Not applicable.

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 Transport Information

DOT HAZARD: Not Applicable
PROPER SHIPPING NAME:

DOT EMERGENCY RESPONSE GUIDE #: Not applicable
Note: Some containers may be DOT exempt, please check BOL for exact container classification

15 Regulatory Information

TSCA:

All components of this product are included on or are in compliance with the U.S. TSCA regulations.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

4,880 gallons due to PHOSPHORIC ACID;

SARA SECTION 312 HAZARD CLASS:

Immediate (acute); Delayed (Chronic)

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65):

This product contains one or more ingredients known to the state of California to cause cancer.

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 Other Information

NFPA/HMIS

CODE TRANSLATION

Health	3	Serious Hazard
Fire	1	Slight Hazard
Reactivity	0	Minimal Hazard
Special	NONE	No special Hazard
(1) Protective Equipment	B	Goggles, Gloves

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
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MSDS status:	13-MAR-2000		** NEW **
	04-APR-2000	12	13-MAR-2000
	17-JUL-2000	15	04-APR-2000
	01-APR-2004	15	17-JUL-2000
	13-FEB-2008	8	01-APR-2004