



Material Safety Data Sheet

Issue Date: 25-APR-2011
Supersedes: 02-SEP-2010

KLEEN MCT511

1 Identification

Identification of substance or preparation

KLEEN MCT511

Product Application Area

Reverse osmosis 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: T 215-355-3300 Prepared on: 25-APR-2011

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Severe irritant to the skin. Severe irritant to the eyes, possibly corrosive. Irritation of the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

DOT hazard: Corrosive to aluminum

Odor: Slight; 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:

Primary route of exposure;Irritation of the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

INGESTION EFFECTS:

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

TARGET ORGANS:

Prolonged or repeated exposure may cause primary irritant dermatitis and/or toxicity to the liver, kidney, nervous system and blood. May increase the risk of cancer based on limited animal data.

MEDICAL CONDITIONS AGGRAVATED:

Pre-existing skin disorders and chronic respiratory disease.

SYMPTOMS OF EXPOSURE:

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

3 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. This product is subject to the Pennsylvania and New Jersey Worker and Community Right to Know Law.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range (w/w%)
5064-31-3	NITRILOTRIACETIC ACID, TRISODIUM SALT (NTA.3NA) Possible human carcinogen (IARC=2B)	0.1-1.0
50-00-0	FORMALDEHYDE Highly toxic (by inhalation); Toxic (by ingestion and skin absorption); irritant (eyes, skin, and respiratory); sensitizer (skin and respiratory); human carcinogen (IARC=1; NTP=anticipated)	0.1-1.0
102-71-6	TRIETHANOLAMINE Irritant (eyes and skin); potential liver and kidney toxin	15-40
64-02-8	ETHYLENE DIAMINE TETRAACETIC ACID, TETRASODIUM SALT Corrosive (eyes); irritant (skin)	15-40
141-43-5	MONOETHANOLAMINE Combustible; corrosive; irritant; CNS depressant; may cause liver and kidney toxicity; fetotoxic and developmental toxin in laboratory animals	7-13
111-42-2	DIETHANOLAMINE Irritant (eyes); absorbed by skin; IARC=3 (carcinogen status not classifiable); potential blood, nervous system, liver and kidney toxin	3-7
2002-24-6	MONOETHANOLAMINE HYDROCHLORIDE Corrosive; may cause liver and kidney toxicity	1-5
119345-04-9	BENZENE, 1,1'-OXYBIS-, TETRAPROPYLENE DERIVATIVES,	1-5

SULFONATED, SODIUM SALTS
Severe irritant (eyes)

NON-HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
7732-18-5	WATER
2836-32-0	SODIUM GLYCOLATE
7647-14-5	SODIUM CHLORIDE

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. Dilute contents of stomach using 2-8 fluid ounces (60-240 mL) of milk or water.

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 sulfur; hydrogen chloride; ammonia and volatile amines

FLASH POINT:

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

MISCELLANEOUS:

Corrosive to aluminum
UN 3267;Emergency Response Guide #153

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 and storage

HANDLING:

Normal chemical handling.

STORAGE:

Keep containers closed when not in use. Protect from freezing. If frozen, thaw and mix completely prior to use. Shelf life 270 days.

8 Exposure controls / personal protection

EXPOSURE LIMITS**CHEMICAL NAME**

NITRILOTRIACETIC ACID, TRISODIUM SALT (NTA.3NA)

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

FORMALDEHYDE

PEL (OSHA): 0.75 PPM (STEL-2PPM)

TLV (ACGIH): 0.3 PPM-CEILING

TRIETHANOLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): 5 MG/M3

ETHYLENE DIAMINE TETRAACETIC ACID, TETRASODIUM SALT

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

MONOETHANOLAMINE

PEL (OSHA): 3 PPM (6 MG/M3)

TLV (ACGIH): TWA = 3 PPM; STEL = 6 PPM

MISC: NIOSH REL = 3 PPM (8 MG/M3); NIOSH STEL = 6 PPM (15 MG/M3);

NIOSH IDLH = 30 PPM

DIETHANOLAMINE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): TWA (Skin) = 1 MG/M3; A3 (Inhalable fraction and vapor)

MISC: NIOSH REL = 3 PPM (15 MG/M3);

MONOETHANOLAMINE HYDROCHLORIDE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

BENZENE, 1,1'-OXYBIS-, TETRAPROPYLENE DERIVATIVES, SULFONATED, SODIUM SALTS

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.

TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.

8) EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

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 organic vapor cartridges and any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

SKIN PROTECTION:

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

EYE PROTECTION:

splash proof chemical goggles

9 Physical and chemical properties

Spec. Grav. (70F, 21C)	1.217	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	-10	Vapor Density (air=1)	~ 5.00
Freeze Point (C)	-23		
Viscosity (cps 70F, 21C)	99	% Solubility (water)	100.0
Odor		Slight	
Appearance		Colorless To Amber	
Physical State		Liquid	
Flash Point	P-M(CC)	> 200F > 93C	
pH As Is (approx.)		10.9	
Evaporation Rate (Ether=1)		< 1.00	
Percent VOC:		36.0	

NA = not applicable ND = not determined

10 Stability and reactivity

CHEMICAL STABILITY:

Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:

No known hazardous reactions.

INCOMPATIBILITIES:

May react with strong oxidizers.

DECOMPOSITION PRODUCTS:

oxides of carbon, nitrogen and sulfur; hydrogen chloride; ammonia and volatile amines

11 Toxicological information

Oral LD50 RAT: 3070 mg/kg
NOTE - Calculated value according to GHS additivity formula
Dermal LD50 RABBIT: >5000 mg/kg
NOTE - Calculated value according to GHS additivity formula

12 Ecological information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 342; No Effect Level= 250 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 61.6; No Effect Level= 25 mg/L

BIODEGRADATION

BOD-28 (mg/g): 142
BOD-5 (mg/g): 130
COD (mg/g): 805
TOC (mg/g): 242

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

Transportation Hazard: Corrosive to aluminum
DOT: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(ETHYLENEDIAMINE TETRAACETIC ACID SODIUM SALT)
8, UN 3267, PG III, (DIETHANOLAMINE) RQ
DOT EMERGENCY RESPONSE GUIDE #: 153
Note: Some containers may be DOT exempt, please check BOL for exact container classification
IATA: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(ETHYLENEDIAMINE TETRAACETIC ACID SODIUM SALT)
8, UN 3267, PG III
IMDG: CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.(ETHYLENEDIAMINE TETRAACETIC ACID SODIUM SALT)
8, UN 3267, PG III

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):

250 gallons due to DIETHANOLAMINE;

NSF Registered and/or meets USDA (according to 1998 Guidelines):

Registration number: Not Registered

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic)

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

CAS#	CHEMICAL NAME	RANGE
111-42-2	DIETHANOLAMINE	2.0-5.0%

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 and reproductive toxicity.

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 Other information

HMIS vII

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:	09-AUG-2000		** NEW **
	03-JAN-2001	2,3,8,15	09-AUG-2000
	05-DEC-2005	2,3,8,15	03-JAN-2001
	19-DEC-2005	2,3,8,15	05-DEC-2005
	12-JAN-2007	2,14	19-DEC-2005
	20-DEC-2007	4,5,7,8,10	12-JAN-2007
	01-APR-2009	8	20-DEC-2007
	30-JUN-2009	3,15	01-APR-2009
	03-NOV-2009	3,8,15	30-JUN-2009
	20-JAN-2010	3,8	03-NOV-2009
	08-MAR-2010	3,8	20-JAN-2010
	02-SEP-2010	8	08-MAR-2010
	25-APR-2011	14	02-SEP-2010