



# Material Safety Data Sheet

Issue Date: 03-NOV-2011  
Supercedes: 02-JUL-2010

KLEEN MCT882

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## 1 Identification

### Identification of substance or preparation

KLEEN MCT882

### 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: 03-NOV-2011

## 2 Hazard(s) identification

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### EMERGENCY OVERVIEW

#### WARNING

May cause moderate irritation to the skin. Severe irritant to the eyes. Mists/aerosols may cause irritation to upper respiratory tract.

DOT hazard is not applicable

Odor: Slight; Appearance: Light Yellow 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

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### POTENTIAL HEALTH EFFECTS

#### ACUTE SKIN EFFECTS:

Primary route of exposure; May cause moderate irritation to the skin.

#### ACUTE EYE EFFECTS:

Severe irritant to the eyes.

#### ACUTE RESPIRATORY EFFECTS:

Mists/aerosols may cause irritation to upper respiratory tract.

**INGESTION EFFECTS:**

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

**TARGET ORGANS:**

No evidence of potential chronic effects.

**MEDICAL CONDITIONS AGGRAVATED:**

Not known.

**SYMPTOMS OF EXPOSURE:**

May cause redness or itching of skin, irritation, and/or tearing of eyes (direct contact).

### 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%)
77-92-9	CITRIC ACID Irritant (eyes)	15-40

**NON-HAZARDOUS INGREDIENTS:**

CAS#	CHEMICAL NAME
7732-18-5	WATER

### 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:**

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. 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 and sulfur

### **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 and storage

### **HANDLING:**

Acidic. Do not mix with alkaline material.

### **STORAGE:**

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

## 8 Exposure controls / personal protection

### **EXPOSURE LIMITS**

#### **CHEMICAL NAME**

#### **CITRIC ACID**

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

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

#### **ENGINEERING CONTROLS:**

adequate ventilation

#### **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 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)	1.082	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	27	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-3		
Viscosity (cps 70F, 21C)	10	% Solubility (water)	100.0

Odor	Slight
Appearance	Light Yellow To Amber
Physical State	Liquid
Flash Point	P-M(CC) > 200F > 93C
pH As Is (approx.)	1.2
Evaporation Rate (Ether=1)	< 1.00
Percent VOC:	0.0

NA = not applicable    ND = not determined

## 10 Stability and reactivity

**CHEMICAL STABILITY:**

Stable under normal storage conditions.

**POSSIBILITY OF HAZARDOUS REACTIONS:**

Contact with strong bases may cause a violent reaction releasing heat.

**INCOMPATIBILITIES:**

May react with bases or strong oxidizers.

**DECOMPOSITION PRODUCTS:**

oxides of carbon and sulfur

## 11 Toxicological information

Oral LD50 RAT: >5000 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 Acute Toxicity (Estimated)  
LC50= 600; No Effect Level= 150 mg/L  
Fathead Minnow 96 Hour Acute Toxicity (Estimated)  
LC50= 330 mg/L

**BIODEGRADATION**

BOD-28 (mg/g): 91

BOD-5 (mg/g): 79  
COD (mg/g): 166  
TOC (mg/g): 73

## 13 Disposal considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :  
D002=Corrosive(pH).

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: Not Applicable  
DOT: Not Regulated

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

IMDG: Not Regulated

## 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):**

No regulated constituent present at OSHA thresholds

### **FOOD AND DRUG ADMINISTRATION:**

21 CFR 176.170 (components of paper and paperboard in contact with aqueous and fatty foods)

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

Registration number: Not Registered

### **SARA SECTION 312 HAZARD CLASS:**

Immediate(acute)

### **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):**

No regulated constituents present

### **MICHIGAN REGULATORY INFORMATION**

No regulated constituent present at OSHA thresholds

## 16 Other information

HMIS vII		CODE TRANSLATION
Health	2	Moderate Hazard
Fire	1	Slight Hazard
Reactivity	0	Minimal Hazard
Special	ACID	pH below 2.1
(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 **
	30-JAN-2002	15	09-AUG-2000
	04-FEB-2002	15	30-JAN-2002
	05-DEC-2005	15	04-FEB-2002
	19-DEC-2005	15	05-DEC-2005
	15-NOV-2007	4,5,8,10	19-DEC-2005
	02-JUL-2010	7,10,14	15-NOV-2007
	03-NOV-2011	11	02-JUL-2010