



# Material Safety Data Sheet

Issue Date: 08-SEP-2011  
Supersedes: 02-DEC-2009

FLOGARD MS6208

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## 1 Identification

**Identification of substance or preparation**  
FLOGARD MS6208

**Product Application Area**  
Water-based corrosion inhibitor.

**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: 08-SEP-2011

## 2 Hazard(s) identification

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**EMERGENCY OVERVIEW**

**DANGER**

Corrosive to skin. Corrosive to the eyes. Mists/aerosols cause irritation to the upper respiratory tract.

DOT hazard: Corrosive to skin  
Odor: Mild; Appearance: Colorless To Yellow, Liquid

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

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**POTENTIAL HEALTH EFFECTS**

**ACUTE SKIN EFFECTS:**  
Primary route of exposure; Corrosive to skin.

**ACUTE EYE EFFECTS:**  
Corrosive to the eyes.

**ACUTE RESPIRATORY EFFECTS:**  
Mists/aerosols cause irritation to the upper respiratory tract.

**INGESTION EFFECTS:**

May cause severe irritation or burning of mouth, throat, and gastrointestinal tract with severe chest and abdominal pain, nausea, vomiting, diarrhea, lethargy and collapse. Possible death when ingested in very large doses.

**TARGET ORGANS:**

Prolonged or repeated exposures may cause primary irritant dermatitis and/or tissue necrosis.

**MEDICAL CONDITIONS AGGRAVATED:**

Not known.

**SYMPTOMS OF EXPOSURE:**

Causes severe irritation, burns or tissue ulceration with subsequent scarring.

### 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%)
7646-85-7	ZINC CHLORIDE Corrosive when wet; toxic (by ingestion)	40-70

**NON-HAZARDOUS INGREDIENTS:**

CAS#	CHEMICAL NAME
7732-18-5	WATER

### 4 First-aid measures

**SKIN CONTACT:**

URGENT! Wash thoroughly with soap and water. Remove contaminated clothing. Get immediate medical attention. Thoroughly wash clothing before reuse.

**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. Rinse mouth with plenty of water. Dilute contents of stomach using 4-10 fluid ounces (120-300 mL) of milk or water.

**NOTES TO PHYSICIANS:**

Material is corrosive. It may not be advisable to induce vomiting.  
Possible mucosal damage may contraindicate the use of gastric lavage.

## 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 or foam--Avoid water if possible.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

hydrogen chloride

**FLASH POINT:**

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

**MISCELLANEOUS:**

Corrosive to skin  
UN 1840;Emergency Response Guide #154

## 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. Corrosive (Skin/eyes). Do not mix with alkaline material.

**STORAGE:**

Keep containers closed when not in use. Protect from freezing. Do not store at elevated temperatures.

## 8 Exposure controls / personal protection

**EXPOSURE LIMITS**

**CHEMICAL NAME**

ZINC CHLORIDE

PEL (OSHA): 1 MG/M3 (2MG/M3-STEL)

TLV (ACGIH): 1 MG/M3 (2MG/M3-STEL)

**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 any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

**SKIN PROTECTION:**

gauntlet-type rubber, butyl or neoprene gloves, chemical resistant apron -- Wash off after each use. Replace as necessary.

**EYE PROTECTION:**

splash proof chemical goggles, face shield

## 9 Physical and chemical properties

Spec. Grav. (70F, 21C)	1.568	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	< -30	Vapor Density (air=1)	< 1.00
Freeze Point (C)	< -34		
Viscosity(cps 70F, 21C)	21	% Solubility (water)	100.0
Odor		Mild	
Appearance		Colorless To Yellow	
Physical State		Liquid	
Flash Point	P-M(CC)	> 200F > 93C	
pH As Is (approx.)		1.4	
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:**

hydrogen chloride

## 11 Toxicological information

Oral LD50 RAT: 700 mg/kg  
NOTE - Calculated value according to GHS additivity formula

## 12 Ecological information

**AQUATIC TOXICOLOGY**

Daphnia magna 48 Hour Static Renewal Bioassay

LC50= 7.4; No Effect Level= 1.24 mg/L  
Fathead Minnow 96 Hour Static Renewal Bioassay  
LC50= 6.2; No Effect Level= 1.56 mg/L  
Rainbow Trout 96 Hour Static Acute Bioassay  
LC50= 2.4; No Effect Level= .625 mg/L

#### **BIODEGRADATION**

Product contains only inorganics that are not subject to typical biological degradation. Assimilation by microbes may occur in waste treatment or the environment.

## **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: Corrosive to skin

DOT: ZINC CHLORIDE SOLUTION  
8, UN 1840, PG III, RQ

DOT EMERGENCY RESPONSE GUIDE #: 154

Note: Some containers may be DOT exempt, please check BOL for exact container classification

IATA: ZINC CHLORIDE SOLUTION  
8, UN 1840, PG III

IMDG: ZINC CHLORIDE SOLUTION  
8, UN 1840, 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):**

153 gallons due to ZINC CHLORIDE;

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

Registration number: Not Registered

This product contains ingredients previously approved by USDA to meet G1 classification, chlorine potable water treatment compounds.

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

Immediate(acute);Delayed(Chronic);Reactive

#### **SARA SECTION 302 CHEMICALS:**

No regulated constituent present at OSHA thresholds

#### **SARA SECTION 313 CHEMICALS:**

CAS#	CHEMICAL NAME	RANGE
7646-85-7	ZINC CHLORIDE	41.0-50.0%

#### **CALIFORNIA REGULATORY INFORMATION**

**CALIFORNIA SAFE DRINKING WATER AND TOXIC  
ENFORCEMENT ACT (PROPOSITION 65):**

No regulated constituents present

**MICHIGAN REGULATORY INFORMATION**

CAS#	CHEMICAL NAME
7646-85-7	ZINC CHLORIDE

## 16 Other information

**HMIS vII**

**CODE TRANSLATION**

Health	3	Serious Hazard
Fire	0	Minimal Hazard
Reactivity	1	Slight Hazard
Special	CORR	DOT corrosive
(1) Protective Equipment	D	Goggles,Face Shield,Gloves,Apron

(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-OCT-1997		** NEW **
	20-APR-1998	15;EDIT:9	13-OCT-1997
	04-JAN-1999	10	20-APR-1998
	09-FEB-2000	3,4,7,16;EDIT:5	04-JAN-1999
	22-MAR-2001	15	09-FEB-2000
	31-AUG-2001	15	22-MAR-2001
	19-DEC-2006	2,4,5,10	31-AUG-2001
	02-DEC-2009	4,8,10,14	19-DEC-2006
	08-SEP-2011	11	02-DEC-2009