



Material Safety Data Sheet

Issue Date: 28-OCT-2011
Supersedes: 18-JUN-2009

FERROQUEST FQ7102

1 Identification

Identification of substance or preparation
FERROQUEST FQ7102

Product Application Area
Chemical cleaning compound.

Company/Undertaking Identification
GE Betz, Inc.
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Trevose, PA 19053
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Emergency Telephone
(800) 877-1940

Prepared by Product Stewardship Group: T 215-355-3300 Prepared on: 28-OCT-2011

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Severe irritant to the skin. Potential skin sensitizer. Corrosive to the eyes. Mists/aerosols cause irritation to the upper respiratory tract.

DOT hazard: Corrosive to steel
Odor: Strong; Appearance: Colorless To Light Yellow, 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. Potential skin sensitizer.

ACUTE EYE EFFECTS:

Corrosive to the eyes.

ACUTE RESPIRATORY EFFECTS:

Mists/aerosols cause irritation to the upper respiratory tract.

INGESTION EFFECTS:

May cause severe gastrointestinal irritation.

TARGET ORGANS:

Prolonged or repeated exposures may cause skin sensitization and/or toxicity to the kidney and reproductive system.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

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%)
2809-21-4	PHOSPHONIC ACID, (1-HYDROXYETHYLIDINE) BIS- (HEDP) Corrosive (eyes)	10-20
64-18-6	FORMIC ACID Combustible; corrosive; potential sensitizer (skin)	7-13
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	1-5

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:

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:

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate 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 phosphorus

FLASH POINT:

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

MISCELLANEOUS:

Corrosive to steel

UN 3265;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:

Acidic. Corrosive(Eyes). Do not mix with alkaline material.

STORAGE:

Keep containers closed when not in use. Reasonable and safe
chemical storage. Protect from freezing.

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

PHOSPHONIC ACID, (1-HYDROXYETHYLIDINE) BIS- (HEDP)

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

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

FORMIC ACID

PEL (OSHA): 5 PPM

TLV (ACGIH): 5 PPM

GLYCOLIC ACID (HYDROXYACETIC ACID)

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): LIMITS HAVE NOT BEEN ESTABLISHED BY ACGIH.
MISC: Note- manufacturer's recommended exposure limit: 10 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 organic vapor cartridges and any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

SKIN PROTECTION:

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)	1.112	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	14	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-10		
Viscosity(cps 70F,21C)	10	% Solubility (water)	100.0

Odor	Strong
Appearance	Colorless To Light Yellow
Physical State	Liquid
Flash Point	P-M(CC) > 200F > 93C
pH As Is (approx.)	1.0
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 strong oxidizers.

DECOMPOSITION PRODUCTS:

oxides of carbon and phosphorus

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 Static Screen (pH adjusted)
60% Mortality= 5000; 0% Mortality= 3250 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 1435; No Effect Level= 580 mg/L
Mysid Shrimp 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 8880; No Effect Level= 2000 mg/L

BIODEGRADATION

BOD-28 (mg/g): 31
BOD-5 (mg/g): 14
COD (mg/g): 102
TOC (mg/g): 42

13 Disposal considerations

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

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 steel
DOT: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(ORGANIC PHOSPHONIC ACID)
8, UN3265, PG III
DOT EMERGENCY RESPONSE GUIDE #: 153
Note: Some containers may be DOT exempt, please check BOL for exact container classification
IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(ORGANIC PHOSPHONIC ACID)
8, UN 3265, PG III
IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(ORGANIC PHOSPHONIC ACID)
8, UN3265, 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) :

7,369 gallons due to FORMIC ACID;

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

Registration number: 140968

Category Code(s) :

- G5 Cooling and retort water treatment products - all food processing areas
- G7 Boiler treatment products - all food processing areas/nonfood contact

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
64-18-6	FORMIC ACID	6.0-10.0%

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	3	Serious Hazard
Fire	0	Minimal Hazard
Reactivity	0	Minimal Hazard
Special	CORR	DOT corrosive
(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:	19-NOV-1997		** NEW **
	11-DEC-1997	15	19-NOV-1997
	21-MAY-1998	2,3	11-DEC-1997
	26-SEP-2002	4,16	21-MAY-1998
	27-MAR-2008	4,5,8,10	26-SEP-2002
	21-OCT-2008	14	27-MAR-2008
	18-JUN-2009	10,15	21-OCT-2008
	28-OCT-2011	11	18-JUN-2009