



Material Safety Data Sheet

Issue Date: 27-FEB-2012
Supersedes: 18-JUN-2009

DIANODIC DN310

1 Identification

Identification of substance or preparation
DIANODIC DN310

Product Application Area
Water-based corrosion inhibitor/deposit control agent.

Company/Undertaking Identification
GE Betz, Inc.
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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: 27-FEB-2012

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

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

DOT hazard: Corrosive to skin
Odor: Mild; Appearance: Dark Brown, 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; Corrosive to skin.

ACUTE EYE EFFECTS:
Corrosive to the eyes.

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

INGESTION EFFECTS:

May cause slight gastrointestinal irritation.

TARGET ORGANS:

No evidence of potential chronic effects.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

May cause redness or itching of skin.

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%)
7778-53-2	PHOSPHORIC ACID, TRIPOTASSIUM SALT Severe irritant (eyes); irritant (skin)	15-40
7320-34-5	TETRAPOTASSIUM PYROPHOSPHATE Corrosive to aluminum; severe eye irritant; skin irritant	5-10
1310-58-3	POTASSIUM HYDROXIDE Corrosive; toxic (by ingestion)	1-5
202420-04-0	CHLOROTOLYLTRIAZOLE SODIUM SALT Potential irritant	1-5

NON-HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
7732-18-5	WATER
78266-09-8	2-PROPENOIC ACID POLYMER WITH 2-HYDROXY-3-(2-PROPENYLOXY)-1-PROPANE SULFONIC ACID, SODIUM SALT

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:

Remove to fresh air. Get medical attention if cough or other symptoms develop.

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:

elemental oxides

FLASH POINT:

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

MISCELLANEOUS:

Corrosive to skin

UN 3266;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:

Alkaline. Do not mix with acidic material.

STORAGE:

Keep containers closed when not in use. Store in cool ventilated
location. Store away from oxidizers.

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

PHOSPHORIC ACID, TRIPOTASSIUM SALT

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

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

TETRAPOTASSIUM PYROPHOSPHATE

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

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

POTASSIUM HYDROXIDE

PEL (OSHA): LIMITS HAVE NOT BEEN ESTABLISHED BY US OSHA.
TLV (ACGIH): TWA (Ceiling) = 2 MG/M3

CHLOROTOLYLTRIAZOLE SODIUM SALT

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

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 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)	1.362	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	5	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-15		
Viscosity(cps 70F,21C)	12	% Solubility (water)	100.0

Odor	Mild
Appearance	Dark Brown
Physical State	Liquid
Flash Point	P-M(CC) > 200F > 93C
pH As Is (approx.)	13.7
Evaporation Rate (Ether=1)	< 1.00
Percent VOC:	1.0

NA = not applicable ND = not determined

10 Stability and reactivity

CHEMICAL STABILITY:

Stable under normal storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS:

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

INCOMPATIBILITIES:

May react with strong oxidizers.

DECOMPOSITION PRODUCTS:

elemental oxides

11 Toxicological information

Oral LD50 RAT: >2,000 mg/kg
NOTE - Estimated value
Dermal LD50 RABBIT: >2,000 mg/kg
NOTE - Estimated value

12 Ecological information

AQUATIC TOXICOLOGY

Ceriodaphnia 48 Hour Static Renewal Bioassay (pH adjusted)
LC50= 1410; No Effect Level= 357 mg/L
Daphnia magna 48 Hour Static Screen (pH adjusted)
0% Mortality= 2000 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay (pH adjusted)
LC50= 330; No Effect Level= 125 mg/L

BIODEGRADATION

BOD-28 (mg/g): 23
BOD-5 (mg/g): 12
COD (mg/g): 184
TOC (mg/g): 69

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: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(POTASSIUM HYDROXIDE SOLUTION)
8, UN3266, PG III RQ
DOT EMERGENCY RESPONSE GUIDE #: 154
Note: Some containers may be DOT exempt, please check BOL for exact container classification
IATA: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(POTASSIUM HYDROXIDE SOLUTION)
8, UN3266, PG III
IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(POTASSIUM HYDROXIDE SOLUTION)
8, UN3266, 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):

3,737 gallons due to POTASSIUM HYDROXIDE;

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

Registration number: 140833

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)

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	3	Serious Hazard
Fire	1	Slight Hazard
Reactivity	0	Minimal 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: 04-MAY-2000		** NEW **
18-JUN-2009	4,8,10,15	04-MAY-2000
27-FEB-2012	2,4,5,8,14,16	18-JUN-2009