



Material Safety Data Sheet

Issue Date: 21-MAR-2011
Supersedes: 26-AUG-2009

CORRSHIELD MD4100

1 Identification

Identification of substance or preparation
CORRSHIELD MD4100

Product Application Area
Water-based corrosion inhibitor.

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: 21-MAR-2011

2 Hazard(s) identification

EMERGENCY OVERVIEW

WARNING

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

DOT hazard: Corrosive to aluminum, RQ
Odor: Mild; Appearance: Yellow, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus(full face-piece type). Proper fire-extinguishing media:
Flood with water. Use of CO2 or foam may not be effective.

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; May cause slight 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 slight gastrointestinal irritation.

TARGET ORGANS:

Prolonged or repeated exposures may cause toxicity to the blood and/or lung.

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.

HAZARDOUS INGREDIENTS:

Cas#	Chemical Name	Range (w/w%)
7631-95-0	SODIUM MOLYBDATE (MOLYBDIC ACID, DISODIUM SALT) Potential irritant (respiratory); potential lung toxicity	10-20
7632-00-0	SODIUM NITRITE Oxidizer; toxic (by ingestion); potential blood toxin	7-13

4 First-aid measures

SKIN CONTACT:

Wash thoroughly with soap and water. Remove contaminated clothing. 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:

Flood with water. Use of CO2 or foam may not be effective.

HAZARDOUS DECOMPOSITION PRODUCTS:

oxides of carbon, nitrogen and sulfur

FLASH POINT:

> 200F > 93C SETA(CC)

MISCELLANEOUS:

Corrosive to aluminum, RQ

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:

Contains an oxidizer. Avoid all contact with reducing agents, oils, greases, organics and acids. Do not allow to dry.

STORAGE:

Keep containers closed when not in use. Do not freeze. If frozen, thaw and mix completely prior to use. Store in cool ventilated location. Store away from oxidizers. Store away from acids. Do not store in aluminum containers.

8 Exposure controls / personal protection

EXPOSURE LIMITS**CHEMICAL NAME**

SODIUM MOLYBDATE (MOLYBDIC ACID, DISODIUM SALT)

PEL (OSHA): 5 MG/M3 (AS Mo)

TLV (ACGIH): 0.5 MG/M3 (AS Mo) RESPIRABLE FRACTION

SODIUM NITRITE

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:

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

EYE PROTECTION:

splash proof chemical goggles

9 Physical and chemical properties

Spec. Grav. (70F,21C)	1.184	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	14	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-10		
Viscosity(cps 70F,21C)	4	% Solubility (water)	100.0
Odor		Mild	
Appearance		Yellow	
Physical State		Liquid	
Flash Point	SETA(CC)	> 200F > 93C	
pH As Is (approx.)		12.8	
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 acids may cause a violent reaction releasing heat. Contact with water reactive compounds may cause fire or explosion.

INCOMPATIBILITIES:

May react with strong reducing agents.

DECOMPOSITION PRODUCTS:

oxides of carbon, nitrogen and sulfur

11 Toxicological information

Oral LD50 RAT:	830 mg/kg
NOTE - Calculated value	
Dermal LD50 RABBIT:	>2,000 mg/kg
NOTE - Estimated value	

12 Ecological information

AQUATIC TOXICOLOGY

Bluegill Sunfish 96 Hour Static Acute Bioassay
LC50= 3258; No Effect Level= 1800 mg/L
Daphnia magna 48 Hour Static Acute Bioassay
LC50= 5997; No Effect Level= 500 mg/L
Fathead Minnow 96 Hour Acute Toxicity (Estimated)
LC50= 2730; No Effect Level= 1850 mg/L
Rainbow Trout 48 Hour Static Screen
0% Mortality= 2000 mg/L

BIODEGRADATION

BOD-28 (mg/g): 1
BOD-5 (mg/g): 0
COD (mg/g): 39
TOC (mg/g): 6

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 aluminum, RQ
DOT: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(SODIUM NITRITE, SODIUM HYDROXIDE)
8, UN 3266, PG III (SODIUM NITRITE) 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.(SODIUM NITRITE, SODIUM HYDROXIDE)
8, UN 3266, PG III
IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(SODIUM NITRITE, SODIUM HYDROXIDE)
8, UN 3266, 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):

101 gallons due to SODIUM NITRITE;

FOOD AND DRUG ADMINISTRATION:

No FDA approval for paper or paperboard having food contact.

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

Registration number: 141672

Category Code(s):

G5 Cooling and retort water treatment products - all

food processing areas

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
7632-00-0	SODIUM NITRITE	6.0-10.0%

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65):

This product contains one or more ingredients at trace levels known to the state of California to cause cancer.

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	ALK	pH above 12.0
(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:	28-JAN-1997		** NEW **
	12-MAY-1997	15	28-JAN-1997
	27-OCT-1998	3, 5, 14	12-MAY-1997
	08-FEB-2000	15	27-OCT-1998
	06-APR-2001	4	08-FEB-2000
	09-AUG-2001	4, 16	06-APR-2001
	17-SEP-2001	8, 10	09-AUG-2001
	03-JAN-2002	2, 3, 8	17-SEP-2001
	01-APR-2004	15	03-JAN-2002
	14-JAN-2009	;EDIT:Rebranding	01-APR-2004
	15-MAY-2009	4, 9, 10, 15	14-JAN-2009
	26-AUG-2009	16	15-MAY-2009
	21-MAR-2011	5, 7, 8, 10	26-AUG-2009