



# Material Safety Data Sheet

Issue Date: 21-OCT-2011  
Supersedes: 21-JUN-2011

SPECTRUS NX1100

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## 1 Identification

**Identification of substance or preparation**  
SPECTRUS NX1100

**Product Application Area**  
Biocide

**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: 21-OCT-2011

## 2 Hazard(s) identification

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**EMERGENCY OVERVIEW**

**DANGER**

Corrosive to skin. Skin sensitizer with delayed onset of symptoms.  
Corrosive to the eyes. Mists/aerosols cause irritation to the upper respiratory tract.

DOT hazard: Corrosive to skin/steel  
Odor: None; Appearance: Colorless To Yellow Green, 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; Corrosive to skin. Skin sensitizer with delayed onset of symptoms.

**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 the gastrointestinal tract.

**TARGET ORGANS:**

Prolonged or repeated exposures may cause tissue necrosis and/or skin sensitization.

**MEDICAL CONDITIONS AGGRAVATED:**

Not known.

**SYMPTOMS OF EXPOSURE:**

Direct contact with skin will cause severe delayed skin reactions or burns if not washed off immediately- follow first aid instructions.

### 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%)
52-51-7	2-BROMO-2-NITROPROPANE-1,3-DIOL Toxic (by ingestion); irritant (eyes); potential sensitizer (skin)	5-10
10377-60-3	MAGNESIUM NITRATE Oxidizer; irritant (eyes and skin)	1-5
55965-84-9	5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE MIXTURE WITH 2-METHYL-4-ISOTHIAZOLIN-3-ONE Corrosive (eyes and skin); sensitizer	1-5
7786-30-3	MAGNESIUM CHLORIDE Potential irritant	1-5

### 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. 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:**

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, foam or water

**HAZARDOUS DECOMPOSITION PRODUCTS:**

oxides of carbon, nitrogen, and sulfur; hydrogen chloride; and hydrogen bromide

**FLASH POINT:**

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

**MISCELLANEOUS:**

Corrosive to skin/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. Do not add decontaminant solution to waste drum containing biocide or adsorbent. Decontaminate floor residual with 10% metabisulfite solution. Use 10 volumes of solution to one volume of spill.

**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 - Dispose of in approved pesticide facility or according to label instructions.

## 7 Handling and storage

**HANDLING:**

Corrosive to skin. Corrosive to eyes.

**STORAGE:**

Keep containers closed when not in use. Protect from freezing. If frozen, thaw and mix completely prior to use. Shelf life 360 days. Do not store in steel or aluminum containers.

## 8 Exposure controls / personal protection

**EXPOSURE LIMITS**

**CHEMICAL NAME**

2-BROMO-2-NITROPROPANE-1,3-DIOL

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

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

MAGNESIUM NITRATE

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

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

5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE MIXTURE WITH  
2-METHYL-4-ISOTHIAZOLIN-3-ONE

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

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

MISC: Manufacturer's recommended exposure limit: TWA = 0.1 mg/m3;

STEL = 0.3 mg/m3 (total isothiazoline)

MAGNESIUM CHLORIDE

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

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

**8) EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)**

**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:**

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)	1.107	Vapor Pressure (mmHG)	~ 18.0
Freeze Point (F)	24	Vapor Density (air=1)	< 1.00
Freeze Point (C)	-4		
Viscosity(cps 70F,21C)	10	% Solubility (water)	100.0

Odor	None
Appearance	Colorless To Yellow Green
Physical State	Liquid
Flash Point	P-M(CC) > 200F > 93C
pH As Is (approx.)	3.0
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. 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; hydrogen chloride; and hydrogen bromide

## 11 Toxicological information

Oral LD50 RAT:	1030 mg/kg
Dermal LD50 RABBIT:	>5000 mg/kg
NOTE - Calculated value according to GHS additivity formula	
Skin Irritation Score RABBIT:	CORROSIVE
Eye Irritation Score RABBIT:	CORROSIVE
Skin Sensitization G.PIG:	NEGATIVE

## 12 Ecological information

**AQUATIC TOXICOLOGY**

Ceriodaphnia 48 Hour Static Renewal Bioassay  
LC50= 4.7; No Effect Level= .63 mg/L  
Daphnia magna 48 Hour Static Renewal Bioassay  
LC50= 5; No Effect Level= 2.5 mg/L  
Fathead Minnow 96 Hour Static Renewal Bioassay  
LC50= 3.5; No Effect Level= 1.8 mg/L  
Mysid Shrimp 48 Hour Static Renewal Bioassay  
LC50= 40.5; No Effect Level= 18 mg/L  
Rainbow Trout 96 Hour Static Renewal Bioassay  
LC50= 7.2; No Effect Level= 3.1 mg/L  
Sheepshead Minnow 96 Hour Static Renewal Bioassay  
LC50= 26.7; No Effect Level= 15.5 mg/L

**BIODEGRADATION**

BOD-28 (mg/g): 4  
BOD-5 (mg/g): 2  
COD (mg/g): 78  
TOC (mg/g): 29

## 13 Disposal considerations

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :  
D002=Corrosive(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 skin/steel  
DOT: CORROSIVE LIQUID, ACIDIC, ORGANIC,  
N.O.S.(5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE)  
8, UN3265, PG II  
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.(5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE)  
8, UN 3265, PG II  
IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC,  
N.O.S.(5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE)  
8, UN3265, PG II, MARINE POLLUTANT

## 15 Regulatory information

**TSCA:**

This is an EPA registered biocide and is exempt from TSCA inventory requirements.

**CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):**

No regulated constituent present at OSHA thresholds

**FIFRA REGISTRATION NUMBER:**

3876- 151

**FOOD AND DRUG ADMINISTRATION:**

21 CFR 176.300 & 176.170 (slimicides and as a preservative)  
When used in this specified application, all ingredients comprising this product are authorized by FDA for the manufacture of paper and paperboard that may contact aqueous and fatty foods as per 21 CFR 176.170(a)(4).

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

Registration number: 141064

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
10377-60-3	MAGNESIUM NITRATE	2.0-5.0%

**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	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:	24-SEP-1997		** NEW **
	26-FEB-1998	12	24-SEP-1997
	20-MAY-1998	15	26-FEB-1998
	22-MAY-1998	2	20-MAY-1998
	07-JUL-1998	12	22-MAY-1998
	15-DEC-1998	7	07-JUL-1998
	01-APR-1999	12	15-DEC-1998
	05-NOV-1999	12	01-APR-1999
	11-MAY-2001	4	05-NOV-1999
	17-JAN-2002	10	11-MAY-2001
	12-OCT-2004	15	17-JAN-2002
	17-NOV-2004	15	12-OCT-2004
	14-JUN-2005	3,9	17-NOV-2004
	04-JAN-2007	2,5,7,10	14-JUN-2005
	25-JAN-2007	5,9,13	04-JAN-2007
	22-MAR-2007	5,9,13	25-JAN-2007
	29-JUN-2007	6,8,16	22-MAR-2007
	02-JUL-2008	4,8	29-JUN-2007
	15-MAY-2009	15	02-JUL-2008
	17-JUN-2009	15	15-MAY-2009
	05-FEB-2010	6	17-JUN-2009
	12-AUG-2010	3,7,8	05-FEB-2010
	21-JUN-2011	10,12	12-AUG-2010
	21-OCT-2011	14	21-JUN-2011