



Material Safety Data Sheet

Issue Date: 14-JUL-2011
Supersedes: 09-JUL-2009

SPECTRUS NX1101

1 Identification

Identification of substance or preparation
SPECTRUS NX1101

Product Application Area
Water-based microbial control agent.

Company/Undertaking Identification
GE Betz, Inc.
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Prepared by Product Stewardship Group: T 215-355-3300 Prepared on: 14-JUL-2011

2 Hazard(s) identification

EMERGENCY OVERVIEW

DANGER

Corrosive to skin. Corrosive to the eyes. Irritation of the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

DOT hazard: Corrosive to skin
Odor: Slight; 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, 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:
Irritation of the upper respiratory tract. Prolonged exposure may cause dizziness and headache.

INGESTION EFFECTS:

May cause severe gastrointestinal irritation with possible nausea, vomiting and abdominal pain.

TARGET ORGANS:

Prolonged or repeated exposures may cause CNS depression, primary irritant dermatitis, tissue necrosis, and/or toxicity to the liver and kidney.

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%) |
|------------|---|--------------|
| 68424-85-1 | ALKYL(C12-C16) DIMETHYLBENZYLAMMONIUM CHLORIDE Corrosive (eyes and skin); toxic (by ingestion) | 7-13 |
| 52-51-7 | 2-BROMO-2-NITROPROPANE-1,3-DIOL Toxic (by ingestion); irritant (eyes); potential sensitizer (skin) | 5-10 |
| 64-17-5 | ETHANOL Flammable liquid; irritant (eyes); may cause CNS depression; potential liver, kidney, brain, heart and male reproductive toxin; produced mutagenic effects in germ cells and somatic cells (in vivo) | 1-5 |

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:

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 nitrogen, hydrogen chloride, and hydrogen bromide

FLASH POINT:

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

MISCELLANEOUS:

Corrosive to skin

UN 3265;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 - Dispose of in approved pesticide facility or according to label instructions.

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. If frozen, thaw and mix completely prior to use. Shelf life 270 days.

8 Exposure controls / personal protection

EXPOSURE LIMITS

CHEMICAL NAME

ALKYL(C12-C16) DIMETHYLBENZYLAMMONIUM CHLORIDE

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

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

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.

ETHANOL

PEL (OSHA): 1000 PPM (1900 MG/M3)

TLV (ACGIH): STEL = 1,000 PPM; A3

MISC: NIOSH REL = 1000 PPM (1900 MG/M3); NIOSH IDLH = 3300 PPM

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) | 1.021 | Vapor Pressure (mmHG) | ~ 18.0 |
| Freeze Point (F) | 26 | Vapor Density (air=1) | < 1.00 |
| Freeze Point (C) | -3 | | |
| Viscosity(cps 70F,21C) | 16 | % Solubility (water) | 100.0 |
| Odor | | Slight | |
| Appearance | | Colorless To Yellow | |
| Physical State | | Liquid | |
| Flash Point | P-M(CC) | > 200F > 93C | |
| pH As Is (approx.) | | 1.9 | |
| Evaporation Rate (Ether=1) | | < 1.00 | |
| Percent VOC: | | 2.3 | |

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:

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

11 Toxicological information

| | |
|---|--------------|
| Oral LD50 RAT: | 1260 mg/kg |
| Dermal LD50 RABBIT: | >5000 mg/kg |
| NOTE - Calculated value according to GHS additivity formula | |
| Inhalation LC50 RAT: | 1.1 mg/L/4hr |
| Skin Irritation Score RABBIT: | CORROSIVE |
| Eye Irritation Score RABBIT: | CORROSIVE |
| Skin Sensitization G.PIG: | NEGATIVE |

12 Ecological information

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Renewal Bioassay
LC50= .25; No Effect Level= .2 mg/L
Fathead Minnow 96 Hour Static Renewal Bioassay
LC50= 5.3; No Effect Level= 2.7 mg/L
Menidia beryllina (Silversides) 96 Hour Static Renewal Bioassay
LC50= 6.8; No Effect Level= 2.5 mg/L
Mysid Shrimp 96 Hour Static Renewal Bioassay
LC50= 1.2; No Effect Level= .16 mg/L

BIODEGRADATION

BOD-28 (mg/g): 8
BOD-5 (mg/g): 8
COD (mg/g): 389
TOC (mg/g): 84

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, ACIDIC, ORGANIC, N.O.S.(ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE)
8, UN 3265, PG III
DOT EMERGENCY RESPONSE GUIDE #: 154
Note: Some containers may be DOT exempt, please check BOL for exact container classification
IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE)
8, UN 3265, PG III
IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE)
8, UN 3265, PG III, 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- 147

FOOD AND DRUG ADMINISTRATION:

The ingredients in this product are approved by FDA under 21 CFR 176.300.

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

Registration number: Not Registered
This product is composed of ingredients previously approved by USDA to meet G5 and G7 classification and may be used in water for cooking/cooling or in boiler or cooling systems with no food 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:

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 |
|--------------|-------------------|-----------------------|-------------|
| | ----- | ----- | ----- |
| MSDS status: | 20-JUL-1998 | | ** NEW ** |
| | 06-JAN-1999 | 10 | 20-JUL-1998 |
| | 13-APR-1999 | 15 | 06-JAN-1999 |
| | 05-APR-2007 | 2 | 13-APR-1999 |
| | 29-APR-2009 | 4, 5, 7, 8, 10 | 05-APR-2007 |
| | 09-JUL-2009 | 8 | 29-APR-2009 |
| | 14-JUL-2011 | 14 | 09-JUL-2009 |