



SAFETY DATA SHEET

SPECTRUS* BD1500

1. Product and Company Identification

Material name SPECTRUS BD1500
Version # 2.0
Revision date 02/06/2014
Supersedes date 27/05/2011
Chemical description Aqueous alkaline solution of polymer based on propylene oxide and ethylene oxide
CAS # Mixture
Product application Water based deposit control agent.

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

2. Hazards Identification

Emergency overview CAUTION

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

Potential health effects

Eyes May cause moderate irritation to the eyes.
Skin Primary route of exposure; May cause slight irritation to the skin.
Inhalation Mists/aerosols may cause irritation to upper respiratory tract.
Ingestion May cause slight gastrointestinal irritation.
Target organs No evidence of potential chronic effects.
Signs and symptoms Irritating to eyes and skin.
Medical conditions aggravated by exposure None known.

3. Composition / Information on Ingredients

Non-hazardous components	CAS #
Water	7732-18-5
Alkylene oxide block polymer	9003-11-6

Composition comments 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.

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Keep eyelids apart. Get medical attention immediately.
Skin contact	Wash off with soap and water. Remove contaminated clothing. Get medical attention immediately. Wash clothing separately before reuse.
Inhalation	Move to fresh air. For breathing difficulties, oxygen may be necessary. If breathing stops, provide artificial respiration. Get medical attention immediately.
Ingestion	Rinse mouth with water. Do not feed anything by mouth to an unconscious or convulsive victim. Do NOT induce vomiting! Immediately contact a physician. Dilute contents of stomach using 2-8 fluid ounces (60-240ml) of milk or water.

Notes to physician

No special instructions.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing media No information available.

Protection of firefighters

Specific hazards arising from the chemical Oxides of carbon evolved in fire.

Protective equipment and precautions for firefighters Fire fighters should wear positive pressure self-contained breathing apparatus.

Fire fighting equipment/instructions Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

Hazardous combustion products Oxides of carbon

General fire hazards This product is not flammable.

6. Accidental Release Measures

Personal precautions Alkaline. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions Handle in accordance with good industrial hygiene and safety procedures.

Methods for cleaning up Ventilate the area. Absorb onto inert material and dispose of according to Controlled Waste Regulations. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.

7. Handling and Storage

Handling Alkaline.
Do not mix with acidic material.

Storage Store containers closed when not in use.
Store away from acids.

8. Exposure Controls / Personal Protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s).

Engineering controls Adequate ventilation to maintain air contaminants below exposure limits.

Personal protective equipment

Eye / face protection Splash proof chemical goggles.

Skin protection Rubber, butyl, viton or neoprene gloves. Wash off after each use. Replace as necessary.

Respiratory protection No personal respiratory protective equipment normally required. 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. If air-purifying respirator use is appropriate, use any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.

General hygiene considerations Wash hands after handling.

9. Physical & Chemical Properties

Appearance

Physical state	Liquid
Color	Colorless
Odor	Slight
Odor threshold	Not available.
pH (concentrated product)	12.5
Vapor pressure	18 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Boiling point	220 °F (104 °C)
Melting point/Freezing point	31 °F (-1 °C)
Solubility (water)	100 %
Specific gravity (70°F, 21°C)	1.02
Flash point	Not applicable.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
Evaporation rate	< 1 (Ether = 1)
Viscosity	30 cps
Viscosity temperature	70 °F (21 °C)
Percent volatile	0 (Estimated)
Pour point	26 °F (-3 °C)

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Protect from freezing. Contact with incompatible materials.
Incompatible materials	Avoid contact with acids and oxidizing substances.
Hazardous decomposition products	Oxides of carbon evolved in fire.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Product	Species	Test Results
SPECTRUS BD1500 (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 5000 mg/kg, (Calculated according to GHS additivity formula)
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, (Calculated according to GHS additivity formula)

Carcinogenicity

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Skin corrosion/irritation	Prolonged or repeated exposure may cause transient irritation.
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12. Ecological Information

Ecotoxicity

Product		Species	Test Results
SPECTRUS BD1500 (CAS Mixture)	0% Mortality	Fathead Minnow	2000 mg/L, Static Bioassay with 48-Hour Renewal, 96 hour
		Menidia beryllina (Silversides)	5000 mg/L, Static Acute Bioassay, 96 hour
	25% Mortality	Mysid Shrimp	5000 mg/L, Static Acute Bioassay, 96 hour
		IC25	Ceriodaphnia
	LC50	Fathead Minnow	3000 mg/L, Static Renewal Bioassay, 7 day
		Brown Shrimp	50 mg/L, Static Acute Bioassay, 48 hour
		Ceriodaphnia	> 3000 mg/L, Static Renewal Bioassay, 48 hour
		Fathead Minnow	> 3000 mg/L, Static Renewal Bioassay, 7 day
	NOEL	Mysid Shrimp	2500 mg/L, Static Acute Bioassay, 96 hour
	Crustacea	0% Mortality	Daphnia magna
Other	NOEL	Rainbow Trout	3000 mg/L, Static Renewal Bioassay, 96 hour

Persistence and degradability

- COD (mgO ₂ /g)	341 (calculated data)
- BOD 5 (mgO ₂ /g)	4 (calculated data)
- BOD 28 (mgO ₂ /g)	5 (calculated data)
- Closed Bottle Test (% Degradation in 28 days)	1 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	9 (calculated data)
- TOC (mg C/g)	80 (calculated data)

13. Disposal Considerations

Waste codes	Hazardous Waste
Disposal instructions	According to Controlled Waste Regulations. Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations.
Contaminated packaging	According to Controlled Waste Regulations. Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

14. Transport Information

DOT	Not regulated as dangerous goods. Some containers may be DOT exempt, please check BOL for exact container classification.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
TDG	Not regulated as a dangerous good.

15. Regulatory Information

US federal regulations

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance
None listed.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity, lbs

None listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Ethylene oxide (oxirane)	75-21-8	10	1000 lbs		
Propylene oxide	75-56-9	100	10000 lbs		

SARA 311/312 Hazardous chemical
No

Clean Water Act (CWA)
Hazardous substance

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Food and drug administration 21 CFR 176.170 (components of paper and paperboard in contact with aqueous and fatty foods)

NSF Registered and/or meets Registration No. - 141059

USDA (according to 1998

guidelines):

Category Code(s):
G5 Cooling and retort water treatment products
G7 Boiler, steam line treatment products - nonfood contact

State regulations

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

1,4-DIOXANE (CAS 123-91-1) Listed: January 1, 1988 Carcinogenic.
Ethylene oxide (oxirane) (CAS 75-21-8) Listed: July 1, 1987 Carcinogenic.
Propylene oxide (CAS 75-56-9) Listed: October 1, 1988 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene oxide (oxirane) (CAS 75-21-8) Listed: August 7, 2009 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene oxide (oxirane) (CAS 75-21-8) Listed: February 27, 1987 Female reproductive toxin.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Ethylene oxide (oxirane) (CAS 75-21-8) Listed: August 7, 2009 Male reproductive toxin.

US - Massachusetts RTK - Substance List

Not regulated.

US - Pennsylvania RTK - Hazardous Substances

Not regulated.

US - Rhode Island RTK

Not regulated.

16. Other Information

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TWA: Time Weighted Average
STEL: Short Term Exposure Limit
LD50: Lethal Dose, 50%
LC50: Lethal Concentration, 50%
NOEL: No Observed Effect Level
COD: Chemical Oxygen Demand
BOD: Biochemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
NFPA: National Fire Protection Association
ACGIH: American Conference of Governmental Industrial Hygienists
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.

HMIS® ratings

Health: 1
Flammability: 0
Physical hazard: 0
Personal protection: B

NFPA ratings

Health: 1
Flammability: 0
Instability: 0
Special hazards: ALK

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Commercial Names
Composition / Information on Ingredients: Disclosure Overrides
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Transport Information: Material Transportation Information
Regulatory Information: Canada
HazReg Data: North America
GHS: Classification

Prepared by

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