

ASHLAND[®]

SAFETY DATA SHEET

Page: 1

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum[™] XD3899 Microbiocide Agent
[™] Trademark, Ashland or its subsidiaries, registered
in various countries 705496

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)
Product name	Spectrum [™] XD3899 Microbiocide Agent	
Product code	[™] Trademark, Ashland or its subsidiaries, registered in various countries 705496	

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, colourless

CAUTION! MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE EYE IRRITATION. HARMFUL IF INHALED.

Potential Health Effects

Exposure routes

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

Skin contact

Unlikely to cause skin irritation or injury.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing this material may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: Rash, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation

ASHLAND®

SAFETY DATA SHEET

Page: 2

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries 705496

(nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), effects on memory, Blurred vision, coma, irritability

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No. / Trade Secret No.	Concentration
AMMONIUM BROMIDE	12124-97-9	>=30-<40%

4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Notes to physician

Hazards: No information available.

Treatment: No hazards which require special first aid measures.

ASHLAND®

SAFETY DATA SHEET

Page: 3

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray

Hazardous combustion products

Ammonia, hydrogen bromide

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ASHLAND[®]

SAFETY DATA SHEET

Page: 4

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

Exposure Guidelines

Contains no substances with occupational exposure limit values.

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Colour	colourless, light yellow
Odour	odourless
Melting point/range	pour point (ca.)30 °F / -1 °C Melting point/range (ca.)25 °F / -4 °C
pH	(ca.) 6.6
Flash point	not applicable
Evaporation rate	(<)1 butyl acetate=1
Vapour pressure	not applicable
Relative vapour density	(<)1 AIR=1
Density	(ca.) 1.23 g/cm ³
Water solubility	completely soluble

ASHLAND®

SAFETY DATA SHEET

Page: 5

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

Viscosity, dynamic	< 10 mPa.s
--------------------	------------

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Exposure to moisture., Freezing temperatures. Exposure to moisture.

Incompatible products

Acids, Bases, Heavy metal salts, Potassium, Silver, Strong oxidizing agents

Hazardous decomposition products

hydrogen bromide, Ammonia

Hazardous reactions

Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin absorption
Skin contact
Eye Contact
Ingestion

Product

Acute oral toxicity : LD 50Rat
> 5,000 mg/kg
The substance or mixture has no acute oral toxicity
Information given is based on tests on the mixture itself.

Acute inhalation toxicity : LC 50 Rat: > 4.1 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD 50 Rat: > 5,000 mg/kg

Skin corrosion/irritation : Species: Rabbit
Result: Not irritating to skin

ASHLAND®

SAFETY DATA SHEET

Page: 6

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

- Serious eye damage/eye irritation : Species: Rabbit
Result: Possibly irritating to eyes
- Respiratory or skin sensitisation : Classification: Did not cause sensitisation on laboratory animals.
- Germ cell mutagenicity
- Genotoxicity in vitro : Type: Ames test
Result: negative
Information refers to the main component.

Components:

AMMONIUM BROMIDE:

- Acute oral toxicity : LD 50 Rat: 2,700 mg/kg
- Acute dermal toxicity : LD 50 Rat: > 2,000 mg/kg
- Respiratory or skin sensitisation : Classification: Did not cause sensitisation on laboratory animals.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

- Toxicity to fish : LC 50 (Lepomis macrochirus (Bluegill sunfish)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- LC 50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): > 1,000 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Components:

AMMONIUM BROMIDE:

- Toxicity to fish : LC 50 (Bluegill (Lepomis macrochirus)): 0.29 mg/l

ASHLAND®

SAFETY DATA SHEET

Page: 7

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

Exposure time: 96 h
Test substance: Biocide formed in-situ

LC 50 (Sheepshead minnow (Cyprinodon variegatus)): 0.36 mg/l
Exposure time: 96 h
Test substance: Biocide formed in-situ

LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)):
0.058 mg/l
Exposure time: 96 h
Test substance: Biocide formed in-situ

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Daphnia magna (Water flea)): 0.023 mg/l
Exposure time: 48 h
Test substance: Biocide formed in-situ

Persistence and degradability

Product:

no data available

Components:

no data available

Bioaccumulative potential

Product:

no data available

Components:

no data available

Mobility in soil

Product:

no data available

Components:

no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations.

ASHLAND®

SAFETY DATA SHEET

Page: 8

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
 ™ Trademark, Ashland or its subsidiaries, registered
 in various countries705496

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
-----------	----------------------	---------------	--------------------	---------------	------------------------------

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

ASHLAND

SAFETY DATA SHEET

Page: 9

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
 ™ Trademark, Ashland or its subsidiaries, registered
 in various countries 705496

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
------------------------------------------------------------------------------------------------------------------------------------------	--

--	--

SARA Hazard Classification
SARA 311/312 Classification
 Acute Health Hazard

SARA 313 Component(s)

AMMONIUM BROMIDE	35.00 %
------------------	---------

1.74% of ammonium bromide (CASRN 12124-97-9) is calculated as ammonia for reporting purposes; see EPA SARA 313 guidance on reporting "dissociable ammonium salt".

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
Japan. ENCS - Existing and New Chemical Substances Inventory	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

	HMIS	NFPA
Health	1	1
Flammability	0	0
Physical hazards	0	
Instability		0
Specific Hazard	--	--

Biocides

8622-64-74655

Hercules Incorporated, A wholly owned subsidiary of Ashland Inc.

16. OTHER INFORMATION

ASHLAND®

SAFETY DATA SHEET

Page: 10

Revision Date: 12/06/2013

Print Date: 4/4/2014

MSDS Number: R0722834

Version: 1.13

Spectrum™ XD3899 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered
in various countries705496

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System