

Revision Date: 11/12/2013

Print Date: 4/4/2014

MSDS Number: R0700089

Version: 1.4

Spectrum™ RX9100 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries, registered in various countries791975

# 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™ RX9100 Microbiocide Agent

™ Trademark, Ashland or its subsidiaries, registered in various countries

Product code

791975

## 2. HAZARDS IDENTIFICATION

## **Emergency Overview**

Appearance: liquid, light green

DANGER! POISON! REDUCES BLOOD'S OXYGEN-CARRYING CAPACITY. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED. MAY BE FATAL IF INHALED. CAUSES SEVERE BURNS OF THE EYES AND SKIN.

### **Potential Health Effects**

#### **Exposure routes**

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

## Eye contact

Can cause permanent eye injury. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure the cornea and cause blindness.

### Skin contact

Can cause permanent skin damage. Symptoms may include redness, burning, and swelling of skin, burns, and other skin damage. May cause allergic skin reaction.

## Ingestion

Swallowing this material may be harmful or fatal. Symptoms may include severe stomach and intestinal irritation (nausea, vomiting, diarrhea), abdominal pain, and vomiting of blood. Swallowing this material may cause burns and destroy tissue in the mouth, throat, and digestive tract. Low blood pressure and shock may occur as a result of severe tissue injury.

### Inhalation

Breathing of vapor or mist is possible. Breathing this material may be harmful or fatal. Symptoms may include severe irritation and burns to the nose, throat, and respiratory tract. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

## **Aggravated Medical Condition**





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Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, Upper respiratory tract, 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:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Cough, choking, wheezing, Dizziness, Lowered blood pressure, Shortness of breath, Difficulty in breathing, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), lung edema (fluid buildup in the lung tissue), Convulsions

### **Target Organs**

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, thymus effects, effects on salivary glands, mild, reversible spleen effects, effects on female fertility, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, damage to tooth enamel, effects on lung function, respiratory tract damage (nose, throat, and airways)

#### Carcinogenicity

This product contains sulfuric acid. The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have listed strong-inorganic-acid mists containing sulfuric acid as causing cancer in humans.

### Reproductive hazard

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain., There are no data available for assessing risk to the fetus from maternal exposure to this material., Inhalation of sulfuric acid fumes was not harmful to the fetus in laboratory animal studies even at levels that caused some harm to the pregnant animals.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Blend of biocidal agents

Hazardous Components	CAS-No. / Trade Secret No.	Concentration
2-BROMO-2-NITRO-1,3-PROPANEDIOL	52-51-7	>=5-<10%
MAGNESIUM NITRATE ANHYDROUS	10377-60-3	>=1.5-<5%
Mixture of 5-chloro-2-methyl-2H-isothiazol-3-	55965-84-9 2682-20-4	>=1.5-<5%
one and 2-methyl-2H-isothiazol-3-one		
SULFURIC ACID	7664-93-9	>=1-<1.5%

Hazardous Components	CAS-No. / Trade Secret	Concentration	
	No.		
2-BROMO-2-NITRO-1,3-PROPANEDIOL	52-51-7	>=5-<10%	
MAGNESIUM NITRATE ANHYDROUS	10377-60-3	>=1.5-<5%	



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SODIUM CITRATE	68-04-2	>=1.5-<5%
Mixture of 5-chloro-2-methyl-2H-isothiazol-3-	55965-84-9 2682-20-4	>=1.5-<5%
one and 2-methyl-2H-isothiazol-3-one		
MAGNESIUM CHLORIDE	7786-30-3	>=1.5-<5%
SULFURIC ACID	7664-93-9	>=1-<1.5%

## 4. FIRST AID MEASURES

#### Eyes

If material gets into the eyes, immediately flush eyes gently with water for at least 15 minutes while holding eyelids apart. If symptoms develop as a result of vapor exposure, immediately move individual away from exposure and into fresh air before flushing as recommended above. Seek immediate medical attention.

#### Skin

Immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash clothing before reuse and discard contaminated shoes.

### Ingestion

Seek immediate medical attention. Do not induce vomiting. Vomiting will cause further damage to the mouth and throat. If individual is conscious and alert, immediately rinse mouth with water and give milk or water to drink. 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: Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. FIREFIGHTING MEASURES

### Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray

## Hazardous combustion products

acid vapors, Bromine, carbon dioxide and carbon monoxide, Chlorine, chlorine oxide, corrosive vapors, formaldehyde, Hydrocarbons, hydrogen bromide, hydrogen chloride, nitrogen oxides (NOx), Sulphur oxides, sulfur oxides, toxic fumes

## 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.





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## NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

## 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. Keep from freezing.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## **Exposure Guidelines**

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one		55965-84-9 2682-20-4	
	time weighted average	0.76 mg/m3	
	Short term exposure limit	0.23 mg/m3	
	time weighted average	1.5 mg/m3	
	Short term exposure limit	4.5 mg/m3	
SULFURIC ACID		7664-93-9	
ACGIH	time weighted average	0.2 mg/m3	Thoracic fraction.
NIOSH	Recommended exposure limit (REL):	1 mg/m3	
OSHA Z1	Permissible exposure	1 mg/m3	





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limit

#### 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**

Mechanical ventilation systems used to ventilate corrosive storage or process areas must be designed with components that are corrosion resistant. 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 and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist. Maintain eye wash station in immediate work area.

## Skin and body protection

Wear appropriate chemical impervious clothing and boots whenever there is potential for skin contact with product. Launder clothing before reuse. Maintain safety shower at all locations where skin contact could occur. Contact your local safety equipment supplier to assist the facility in determining proper selection of personal protective equipment for the applications/operations present at your facility. Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear.

### 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	light green
Odour	odourless
Melting point/range	(ca.)25 °F / -4 °C
рН	2.0 - 4.0
Flash point	> 200.1 °F / > 93.4 °C Pensky Martens closed cup
Evaporation rate	(<)1 n-Butyl Acetate
Vapour pressure	24.000 hPa
Relative vapour density	(<)1 AIR=1
Density	1.05 - 1.15 g/cm3 @ 77 °F / 25 °C



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	9.2 lb/gal @ 70 °F / 21 °C
Water solubility	completely soluble
Viscosity, dynamic	4 - 10 mPa.s @ 21 °C

## 10. STABILITY AND REACTIVITY

# **Stability**

Stable.

## Conditions to avoid

temperatures above 194 degrees F (90 C degrees)

## Incompatible products

Acid anhydrides, Acids, Alcohols, Aldehydes, aluminum, Amines, Bases, carbide, carbonates, Combustible material, Copper, Cyanides, Dimethylformamide, glycols, halogens, Metals, Organic materials, organic nitro compounds, Powdered metals, strong bases, Strong oxidizing agents, strong reducing agents, sulfides, sulphites

### Hazardous decomposition products

acid vapors, Bromine, carbon dioxide and carbon monoxide, Chlorine, chlorine oxide, corrosive vapors, formaldehyde-like, Hydrocarbons, hydrogen bromide, hydrogen chloride, nitrogen oxides (NOx), Sulphur oxides, toxic fumes

#### 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

1,030 mg/kg

Acute inhalation toxicity

: no data available



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Acute dermal toxicity

: LD 50 Rabbit: > 2,000 mg/kg

Skin corrosion/irritation

: Result: Causes burns.

Serious eye damage/eye

irritation

Result: Causes burns.

Respiratory or skin sensitisation :

no data available

Target Organ Systemic Toxicant :

- Repeated Exposure

Target Organs: Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:, thymus effects, effects on salivary glands, mild, reversible spleen effects, effects on female fertility, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, damage to tooth enamel, effects on lung function, respiratory

tract damage (nose, throat, and airways)

## Components:

## 2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Acute oral toxicity

: LD 50 Rat, female: 342 mg/kg

LD 50 Rat, male: 307 mg/kg

Acute inhalation toxicity

: LC 50 Rat: > 0.588 mg/l

Exposure time: 4 h

Aerosol

Acute dermal toxicity

: LD 50 Rat: 1,600 mg/kg

Germ cell mutagenicity

Genotoxicity in vitro

: Type: Ames test Result: negative

### **MAGNESIUM NITRATE ANHYDROUS:**

Acute oral toxicity

: LD 50 Rat: 5,440 mg/kg

Acute dermal toxicity

LD 50 Rat: > 5,000 mg/kg

Information given is based on data obtained from similar

substances.

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Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

Acute oral toxicity

: LD 50 Rat: 49.6 - 75 mg/kg

Acute inhalation toxicity

: LC 50 Rat: 0.33 mg/l

Exposure time: 4 h

Aerosol

Acute dermal toxicity

LD 50 Rabbit: 141 mg/kg

Respiratory or skin sensitisation

Classification: May cause sensitization by skin contact.

Result: May cause sensitization by skin contact.

SULFURIC ACID:

Acute oral toxicity

: LD 50 Rat: 2,140 mg/kg

2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Acute oral toxicity

: LD 50 Rat, female: 342 mg/kg

LD 50 Rat, male: 307 mg/kg

Acute inhalation toxicity

LC 50 Rat: > 0.588 mg/l

Exposure time: 4 h

Aerosol

Acute dermal toxicity

: LD 50 Rat: 1,600 mg/kg

Germ cell mutagenicity

Genotoxicity in vitro

Type: Ames test

Result: negative

**MAGNESIUM NITRATE ANHYDROUS:** 

Acute oral toxicity

: LD 50 Rat: 5,440 mg/kg

Acute dermal toxicity

: LD 50 Rat: > 5,000 mg/kg

Information given is based on data obtained from similar

substances.

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

Acute oral toxicity

: LD 50 Rat: 49.6 - 75 mg/kg

Acute inhalation toxicity

: LC 50 Rat: 0.33 mg/l

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Exposure time: 4 h

Aerosol

Acute dermal toxicity

LD 50 Rabbit: 141 mg/kg

Respiratory or skin sensitisation

Classification: May cause sensitization by skin contact.

Result: May cause sensitization by skin contact.

**MAGNESIUM CHLORIDE:** 

Acute oral toxicity

: LD 50 Rat: 2,800 mg/kg

LD 50 Rat: > 5,000 mg/kg

Acute dermal toxicity

: LD 50 Rat: > 2,000 mg/kg

**SULFURIC ACID:** 

Acute oral toxicity

: LD 50 Rat: 2,140 mg/kg

## 12. ECOLOGICAL INFORMATION

## Ecotoxicity Product:

Toxicity to fish

LC 50 (Fathead minnow (Pimephales promelas)): 3.5 mg/l

Exposure time: 96 h

NOEC (Fathead minnow (Pimephales promelas)): 1.8 mg/l

Exposure time: 96 h

LC 50 (Sheepshead minnow (Cyprinodon variegatus)): 26.7 mg/l

Exposure time: 96 h

NOEC (Sheepshead minnow (Cyprinodon variegatus)): 15.5 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates

LC 50 (Water flea (Ceriodaphnia dubia)): 4.7 mg/l

Exposure time: 48 h

NOEC (Water flea (Ceriodaphnia dubia)): 0.63 mg/l

Exposure time: 48 h

LC 50 (Daphnia): 5 mg/l Exposure time: 48 h



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> NOEC (Daphnia): 2.5 mg/l Exposure time: 48 h

## Components:

## 2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Toxicity to fish

LC 50 (Oncorhynchus mykiss (rainbow trout)): 41.2 mg/l

Exposure time: 96 h

LC 50 (Bluegill (Lepomis macrochirus)): 36 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

EC 50 (Water flea (Daphnia magna)): 1.4 mg/l

Exposure time: 48 h

Toxicity to algae

EC 50 (Aquatic plants): 0.4 - 2.8 mg/l

Exposure time: 72 h

## Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

Toxicity to fish

LC 50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l

Exposure time: 96 h

LC 50 (Lepomis macrochirus (Bluegill sunfish)): 0.28 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

: EC 50 (Water flea (Daphnia magna)): 0.16 mg/l

Exposure time: 48 h

M-Factor

10

Toxicity to bacteria

: EC 50 (activated sludge): 4.5 mg/l

Test Method: Respiration inhibition

## SULFURIC ACID:

Toxicity to fish

LC 50 (Western mosquitofish (Gambusia affinis)): 42 mg/l

Exposure time: 96 h Method: Static

Mortality

## 2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Toxicity to fish

: LC 50 (Oncorhynchus mykiss (rainbow trout)): 41.2 mg/l





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Exposure time: 96 h

LC 50 (Bluegill (Lepomis macrochirus)): 36 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

EC 50 (Water flea (Daphnia magna)): 1.4 mg/l

Exposure time: 48 h

Toxicity to algae

: EC 50 (Aquatic plants): 0.4 - 2.8 mg/l

Exposure time: 72 h

Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

Toxicity to fish

LC 50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l

Exposure time: 96 h

LC 50 (Lepomis macrochirus (Bluegill sunfish)): 0.28 mg/l

Exposure time: 96 h

Toxicity to daphnia and other

aquatic invertebrates

: EC 50 (Water flea (Daphnia magna)): 0.16 mg/l

Exposure time: 48 h

M-Factor

10

Toxicity to bacteria

EC 50 (activated sludge): 4.5 mg/l

Test Method: Respiration inhibition

**MAGNESIUM CHLORIDE:** 

Toxicity to fish

LC 50 (Fathead minnow (Pimephales promelas)): 1,580 - 2,740

ma/l

Exposure time: 96 h Method: Static Mortality

Toxicity to daphnia and other

aquatic invertebrates

EC 50 (Water flea (Daphnia magna)): 140 mg/l

Exposure time: 48 h Method: Static

Intoxication

Toxicity to algae

EC 50 (Desmodesmus subspicatus (green algae)): 2,200 mg/l

Exposure time: 72 h

SULFURIC ACID:

Toxicity to fish

LC 50 (Western mosquitofish (Gambusia affinis)): 42 mg/l

Exposure time: 96 h

Method: Static



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Mortality

## Persistence and degradability

## **Product:**

no data available

## Components:

## 2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Biodegradability

Readily biodegradable

Chemical Oxygen Demand

(COD)

Chemical Oxygen Demand (COD)

## Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

600 mg/g

Biodegradability

Biodegradation: 30 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Not readily biodegradable.

## 2-BROMO-2-NITRO-1,3-PROPANEDIOL:

Biodegradability

: Readily biodegradable

Chemical Oxygen Demand

(COD)

600 mg/g

Chemical Oxygen Demand (COD)

## Mixture of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one:

Biodegradability

Biodegradation: 30 %

Exposure time: 28 d

Method: OECD Test Guideline 301B

Not readily biodegradable.

### Bioaccumulative potential

#### Product:

no data available

### Components:



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2-BROMO	2-NITRO-1	3-PROPA	ANEDIOL
Z-DIXONIO	Z-141 1 1 1 0 - 1		~! 1

Partition coefficient: n-

: log Pow: 2.7

octanol/water

log Pow: Estimated -0.64

Partition coefficient: n-

: log Pow: 2.7

octanol/water

log Pow: Estimated -0.64

Mobility in soil

**Product:** 

no data available

Components:

**SULFURIC ACID:** 

Surface tension

: 55.1 mN/m

Surface tension

: 55.1 mN/m

## 13. DISPOSAL CONSIDERATIONS

Waste disposal methods

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

# 14. TRANSPORT INFORMATION

**REGULATION** 

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

ບ.ວ. ບ	UI-RU	4D			
UN	3265	Corrosive liquid, acidic, organic,	8	ll l	
		n.o.s. (5-CHLORO-2-METHYL-4-			
		ISOTHIAZOLIN-3-ONE)			

U.S. DOT - RAIL

UN	3265	Corrosive liquid, acidic, organic,	8	II
		n.o.s. (5-CHLORO-2-METHYL-4-		
		ISOTHIAZOLIN-3-ONE)		





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UN	3265	Corrosive liquid, acidic, organic, n.o.s. (5-CHLORO-2-METHYL-4- ISOTHIAZOLIN-3-ONE)	8	II	
ran:	SPORT C	CANADA - ROAD	•		
UN	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-CHLORO- 2-METHYL-4-ISOTHIAZOLIN-3- ONE)	8	11	
ΓRAN:	SPORT C	CANADA - RAIL			
UN	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-CHLORO- 2-METHYL-4-ISOTHIAZOLIN-3- ONE)	8	II	
TRAN:	SPORT C	ANADA - INLAND WATERWAYS			
UN	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-CHLORO- 2-METHYL-4-ISOTHIAZOLIN-3- ONE)	8	II	
NTER	NATION	AL MARITIME DANGEROUS GOOI	os		
UN	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (5-CHLORO- 2-METHYL-4-ISOTHIAZOLIN-3- ONE)	8	11	MARINE POLLUTANT:( 2-BROMO-2- NITRO-1,3- PROPANEDIC L)
NTER	NATION	AL AIR TRANSPORT ASSOCIATIO	N - CARGO		
UN	3265	Corrosive liquid, acidic, organic, n.o.s. (5-CHLORO-2-METHYL-4- ISOTHIAZOLIN-3-ONE)	8	[]	
INTER	NATION	AL AIR TRANSPORT ASSOCIATIO	N - PASSENGER		
UN	3265	Corrosive liquid, acidic, organic, n.o.s. (5-CHLORO-2-METHYL-4-	8	II	

MEXICA	N REG	ULATION FOR THE LAND TRANSF	PORT	OF HAZARDOUS MATERIALS AND WASTES	
UN	3265	LIQUIDO CORROSIVO, ACIDO,	8	li .	
		ORGANICO, N.E.P. (5-CHLORO-			
		2-METHYL-4-ISOTHIAZOLIN-3-			
		ONE			

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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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

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

# SARA Hazard Classification SARA 311/312 Classification

Acute Health Hazard Chronic Health Hazard

SARA 313 Component(s)

MAGNESIUM NITRATE ANHYDROUS	3.86 %
SULFURIC ACID	1.03 %

### **Notification status**

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

Reportable quantity - Product

	Viiiii	
US. EPA CERCLA Hazardous Substances	(40 CFR 302)	97068 lbs

Reportable quantity-Components

	7664-93-9	1000 lbs
SULFURIC ACID	/664-93-9	1000108
	700.000	1000 100
<u> </u>		

	HMIS	NFPA
Health	3*	3
Flammability	1	1



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Spectrum™ RX9100 Microbiocide Agent
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Physical hazards	0	
Instability		0 .
Specific Hazard		

#### **Biocides**

3876-151-74655

Hercules Incorporated, A wholly owned subsidiary of Ashland Inc.

### 16. OTHER INFORMATION

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



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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