

ASHLAND®

SAFETY DATA SHEET

Page: 1

Revision Date: 02/05/2013

Print Date: 4/4/2014

MSDS Number: R0704267

Version: 1.2

Spectrum™ RX9800 Microbiocide Agent
™ Trademark, Ashland or its subsidiaries,
registered in various countries432591

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™ RX9800 Microbiocide Agent ™ Trademark, Ashland or its subsidiaries, registered in various countries	
Product code	432591	

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, yellow

DANGER! POISON! 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

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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

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 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

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:; abnormal coloring of the skin, allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), cough, Headache, damage to the mouth, throat, and/or airways, Exposure to this product (or a component) may cause an allergic reaction (narrowing of the air passages of the lungs resulting in difficult breathing, tightness in the chest, coughing and wheezing) in some sensitive individuals. Other symptoms of an allergic reaction may include itchy and watery eyes, runny and stuffy nose, sweating, flushing, hives, rapid heart rate, and lowered blood pressure.

Target Organs

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals:; respiratory tract damage (nose, throat, and airways)

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

Several animal studies have shown that glutaraldehyde is not harmful to the fetus at exposure levels that do not cause serious harm to the pregnant animal.

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Other information

This material (or a component) has been both positive and negative in tests for mutagenicity. The relevance of this finding to human health is uncertain.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No. / Trade Secret No.	Concentration
GLUTARALDEHYDE	111-30-8	>=50-<60%

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.

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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

carbon dioxide and carbon monoxide

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

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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

Product solutions are corrosive to many commonly used materials of construction such as steel, galvanized iron, aluminum, tin and zinc. These solutions can be stored and handled in baked phenolic-lined steel, polyethylene, stainless steel, or reinforced epoxy-plastic equipment. This product freezes at about -17 degrees C (1.4 degrees F). Therefore, unless the storage tank is inside or underground, heating and insulation may be required. If heating is needed, exposure to high temperatures should be avoided. For short storage times (up to about one month), temperatures of up to 100 degrees F can be tolerated, but the preferred maximum storage temperature is about 80 degrees F. Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

GLUTARALDEHYDE		111-30-8
ACGIH	Ceiling Limit Value:	0.05 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	0.2 ppm
NIOSH	Ceiling Limit Value and Time Period (if specified):	0.8 mg/m3

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.

Eye protection

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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	yellow
Odour	pungent, characteristic
Boiling point/boiling range	> 212 °F / > 100 °C
Melting point/range	3 °F / -16 °C
pH	3.1 - 4.5
Flash point	not applicable
Evaporation rate	1.0 n-Butyl Acetate
Vapour pressure	0.200 hPa @ 68 °F / 20 °C
Relative vapour density	1.1 (Air = 1.0)
Density	1.110 - 1.410 g/cm3 @ 68 °F / 20 °C
Water solubility	completely soluble
log Pow	-0.333

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Viscosity, dynamic	42 mPa.s @ 21 °C
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10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

excessive heat

Incompatible products

aluminum, Amines, Ammonia, Carbon steel, Copper, Iron, Mild steel, Strong acids, strong alkalis, Strong oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide

Hazardous reactions

Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

Acute oral toxicity - : LD 50: 1,468 mg/kg Species: Rat

Product LD 50: 226 - 305 mg/kg Species: Mouse

Acute oral toxicity - Components

GLUTARALDEHYDE : LD 50: ca. 316 mg/kg Species: Rat Method: OECD Test
Guideline 401

Acute inhalation toxicity

Acute inhalation toxicity - : no data available

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Product

Acute inhalation toxicity - Components

GLUTARALDEHYDE : LC 100: 15 mg/l Exposure time: 7 h Species: Rat Method:
OECD Test Guideline 403

Acute dermal toxicity

Acute dermal toxicity - Product : LD 50: Expected > 5,000 mg/kg Species: Rabbit

Acute dermal toxicity - Components

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

Acute toxicity (other routes of administration)

Acute toxicity (other routes of administration) : no data available

12. ECOLOGICAL INFORMATION

Biodegradability

Biodegradability - Product : no data available

Biodegradability - Components

GLUTARALDEHYDE : 90 - 100 % Method: OECD Test Guideline 301A Remarks:
Readily biodegradable

Bioaccumulation

Bioaccumulation - Product : no data available

Ecotoxicity effects

Toxicity to fish

Toxicity to fish - Product : LC 50: 24 mg/l
Exposure time: 96 h
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 203LC 50: 10.8 mg/l

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Exposure time: 96 h Species: Pimephales promelas (fathead minnow) Method: OECD Test Guideline 203LC 50: 18.8 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish) Method: OECD Test Guideline 203
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Toxicity to fish - Components

GLUTARALDEHYDE	: LC 50: 13 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish) Test Type: static test
	LC 50: 10 mg/l Exposure time: 96 h Species: Oncorhynchus mykiss (rainbow trout) Test Type: static test

Toxicity to daphnia and other aquatic invertebrates

Toxicity to daphnia and other aquatic invertebrates - Product	: EC 50: 10 mg/l Exposure time: 48 h Species: Water flea (Daphnia magna) Method: OECD Test Guideline 202EC 50: 0.4 mg/l Species: Common bay mussel, blue mussel (Mytilus edulis)LC 50: 0.22 mg/l Species: Calanoid copepod (Acartia tonsa)
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Toxicity to daphnia and other aquatic invertebrates - Components

GLUTARALDEHYDE	: EC 50: 14.87 mg/l Exposure time: 48 h Species: Water flea (Daphnia magna) Test Type: static test
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Toxicity to algae

Toxicity to algae - Product	: IC50: > 100 mg/l Exposure time: 72 h Species: Desmodesmus subspicatus (green algae) Method: OECD Test Guideline 201
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Toxicity to algae - Components

GLUTARALDEHYDE	: EC 50: 0.6 mg/l Exposure time: 72 h Species: Desmodesmus subspicatus (green algae) Test Type: static test
	EC 50: 0.375 mg/l Exposure time: 72 h Species: Desmodesmus subspicatus (green algae) Test Type: static test

Toxicity to bacteria

Toxicity to bacteria - Product	: EC 50: > 34 mg/l Species: BacteriaIC50: > 100 mg/l Species: activated sludge Method: OECD Test Guideline 209
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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 CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT /LTD. QTY.
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U.S. DOT - ROAD

UN 2922	Corrosive liquids, toxic, n.o.s. (GLUTARALDEHYDE)	8	(6.1)	II	
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U.S. DOT - RAIL

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UN	2922	Corrosive liquids, toxic, n.o.s. (GLUTARALDEHYDE)	8	(6.1)	II
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U.S. DOT - INLAND WATERWAYS

UN	2922	Corrosive liquids, toxic, n.o.s. (GLUTARALDEHYDE)	8	(6.1)	II
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TRANSPORT CANADA - ROAD

UN	2922	CORROSIVE LIQUID, TOXIC, N.O.S. (GLUTARALDEHYDE)	8	(6.1)	II
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TRANSPORT CANADA - RAIL

UN	2922	CORROSIVE LIQUID, TOXIC, N.O.S. (GLUTARALDEHYDE)	8	(6.1)	II
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TRANSPORT CANADA - INLAND WATERWAYS

UN	2922	CORROSIVE LIQUID, TOXIC, N.O.S. (GLUTARALDEHYDE)	8	(6.1)	II
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN	2922	CORROSIVE LIQUID, TOXIC, N.O.S. (GLUTARALDEHYDE)	8	(6.1)	II	MARINE POLLUTANT: (GLUTARAL DEHYDE)
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	2922	Corrosive liquid, toxic, n.o.s. (GLUTARALDEHYDE)	8	(6.1)	II
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	2922	Corrosive liquid, toxic, n.o.s. (GLUTARALDEHYDE)	8	(6.1)	II
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	2922	LIQUIDO CORROSIVO, TOXICO, N.E.P. (GLUTARALDEHYDE)	8	(6.1)	II
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*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

SARA 313 Component(s)

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive listing)
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 Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

	HMIS	NFPA
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Health	3	3
Flammability	0	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

Biocides

74655-31

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).