



SAFETY DATA SHEET

Issuing Date 15-Jan-2015

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Revision Number 0

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

GHS product identifier

Product Name **BioRid 38i**
BioRid 40i
BioRid 43i
BioRid 46i

Other means of identification

Synonyms Aqueous Sodium Bromide Solution

EPA Registration Number 2214-14

Recommended use of the chemical and restrictions on use

Recommended Use Water treatment chemical

Uses advised against No information available

Supplier's details

Supplier Address

TETRA Technologies, Inc.
24955 Interstate 45 North
The Woodlands, TX 77380
TEL: 281-367-1983 (Non-Emergency Number)

Emergency telephone number

Emergency Telephone Number CHEMTREC: 1-800-424-9300 for US/ 703-527-3887 outside US

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

Not classified

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word	None
Hazard Statements	
• None	

The product contains no substances which at their given concentration are considered to be hazardous to health

Appearance Clear

Physical State Liquid.

Odor Odorless

Precautionary Statements

Prevention

- None

General Advice

- None

Storage

- None

Disposal

- None

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

May be harmful if swallowed. May be harmful if absorbed through skin. Contact with eyes may cause irritation. Prolonged or repeated skin contact may cause severe irritation.

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

Aqueous Sodium Bromide Solution

Chemical Name	CAS-No	Weight %	Trade secret
Sodium bromide	7647-15-6	30-50	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

General Advice

Call a poison control center or doctor for treatment advice. Have the product containers or label with you when calling a poison control center or doctor, or going for treatment.

Eye Contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a poison control center or doctor for treatment advice.

Skin Contact

Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Call a poison control center or doctor for treatment advice.

Inhalation

Move to fresh air. Get medical attention if symptoms occur. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion

Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Have victim sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Ingestion may cause gastric disturbances, Vomiting, May cause changes in heart rate and blood pressure, Headache, Kidney injury may occur, Coma, Muscle paralysis.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of toxic and corrosive gases/vapors.

Hazardous Combustion Products Bromine. Hydrogen bromide.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.

Environmental Precautions

Environmental Precautions Should not be released into the environment. Collect spillage. Keep out of waterways. Do not allow material to contaminate ground water system. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep at temperatures above 10 °C / 50°F. Keep out of the reach of children. Keep away from incompatible materials.

Incompatible Products Strong oxidizing agents. Acids. Alkali metals. Salts of Heavy Metals

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields. If splashes are likely to occur, wear: Tightly fitting safety goggles, or Face-shield.

Skin and Body Protection Wear appropriate non-leather protective gloves and boots. Wear appropriate protective, impervious clothing. Chemical protective gloves and boots such as PVC or Heavy Nitrile are recommended. Leather products do not offer adequate protection and will dehydrate with resultant shrinkage and possible destruction.

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Appearance	Clear
Odor	Odorless	Odor Threshold	No information available
<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>	
pH	5.5 - 8.5	@ 5%	
Melting Point/Range	No data available	None known	
Boiling Point/Boiling Range	> 100 °C	None known	
Flash Point	Not applicable.	None known	
Evaporation rate	No data available	None known	
Flammability (solid, gas)	No data available	None known	
Flammability Limits in Air			
upper flammability limit	No data available		
lower flammability limit	No data available		
Vapor Pressure	No data available	None known	
Vapor Density	No data available	None known	
Specific Gravity	1.01-1.53 @ 68 F (20 C)	None known	
Water Solubility	Completely soluble	None known	
Solubility in other solvents	No data available	None known	
Partition coefficient: n-octanol/water	No data available	None known	
Autoignition Temperature	No data available	None known	
Decomposition Temperature	No data available	None known	
Viscosity	No data available	None known	

Flammable Properties Not flammable
Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) No data available
Freezing Point

Freezing Points:
BioRid 38i: -26.1 deg C / -15 deg F
BioRid 40i: -29.4 deg C / -21 deg F
BioRid 43i: 12. deg C / 10 deg F
BioRid 46i: 10 deg C / 50 deg F

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

None known based on information supplied.

Incompatible materials

Strong oxidizing agents. Acids. Alkali metals. Salts of Heavy Metals

Hazardous decomposition products

Bromine. Hydrogen bromide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation

There is no data available for this product.

Eye Contact

There is no data available for this product. Based on components: May cause irritation.

Skin Contact

There is no data available for this product. Based on components: May be harmful if absorbed through skin. Prolonged contact may cause redness and irritation.

Ingestion

There is no data available for this product. Based on components: May be harmful if swallowed.

Toxicology data for the components

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium bromide	= 3400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 8947 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Sodium bromide 7647-15-6	EC50 96 h: 5800 - 24000 mg/L (Scenedesmus pannonicus)	LC50 96 h: 0.054-0.081 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 15614-17428 mg/L static (Pimephales promelas) LC50 96 h: 16000 - 24000 mg/L flow-through (Poecilia reticulata) LC50 96 h: 24000 - 96000 mg/L flow-through (Oryzias latipes) LC50 96 h: = 16000 mg/L semi-static (Poecilia reticulata) LC50 96 h: = 24000 mg/L semi-static (Oryzias latipes) LC50 96 h: > 1000 mg/L static (Lepomis macrochirus) LC50 96 h: > 1000 mg/L static (Oncorhynchus mykiss)		EC50 48 h: 5700 - 10800 mg/L Static (Daphnia magna) EC50 48 h: 5800 - 48000 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance on proper disposal of waste product

Contaminated Packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt
DSL Exempt

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations.

U.S. EPA Label Information

EPA Pesticide Registration Number 2214-14

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

16. OTHER INFORMATION

NFPA	Health Hazard 0	Flammability 0	Instability 0	Physical and Chemical Hazards -
HMIS	Health Hazard 1	Flammability 0	Physical Hazard 0	Personal Protection X

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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet