

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MSR PLUS
GENERAL USE: Mold and Mildew Stain Remover
PRODUCT DESCRIPTION: Mold, Mildew and algae Stain Remover
PRODUCT CODE: 23063

MANUFACTURER

Artemis Bio-Solutions, LLC
14505 Torrey Chase Blvd Suite 205
Houston, TX 77014, USA

Emergency Contact: INFOTRAC

Emergency Phone: 1(800) 535-5053

Alternate Emergency Phone: 1(352) 323-3500

Customer Service : 1 (630) 359-4090

E-Mail: info@artemisbiosolutions.com

24 HR. EMERGENCY TELEPHONE NUMBERS

AAPCC Poison Help: (800) 424-9300

CANUTEC (Canadian Transportation): (613) 996-6666

INFOTRAC (US Transportation) : (800) 535-5053

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Skin Corrosion, Category 1

Skin Irritation, Category 1

Serious Eye Damage, Category 1

Target Organ Toxicity (Single Exposure), Category 3

GHS LABEL



SIGNAL WORD: DANGER

HAZARD STATEMENTS

H315: Causes skin irritation.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P285 In case of inadequate ventilation wear respiratory protection.

P264 Wash hands thoroughly after handling.

P234: Keep only in original packaging

Response:

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310: Immediately call a POISON CENTER/doctor/...
 P363: Wash contaminated clothing before reuse.
 P390: Absorb spillage to prevent material damage.
 P391: Collect spillage.

Storage:

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P404 Store in a closed container.
 P401 Store in a cool dry place, protect from sunlight

Disposal:

P501: Disposal should be in accordance with applicable regional, national and local laws and regulations

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt.%	CAS
Hypochlorous Acid, Sodium Salt	<8	7681-52-9
Surfactant Blend	<9	

COMMENTS: Formulation is based on weight % If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice Provide this SDS to medical personnel for treatment.

Eye Contact Immediately flush eyes with plenty of water for 15 minutes. Get medical attention if irritation persists

Skin Contact Remove contaminated clothing and shoes. Skin will turn white on contact. Immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

Ingestion Get medical attention immediately. Call a poison center or physician. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. Call doctor. If vomiting occurs, keep head below hip to prevent aspiration of liquid into lungs.

Most important symptoms and effects

Symptoms **EYES:** Adverse symptoms may include pain or irritation, watering, and redness. Can cause serious eye damage.
SKIN: Adverse symptoms may include irritation and redness. Product may burn the skin.

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical, alcohol foam or carbon dioxide or water spray (fog). Water may be ineffective. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.
Unsuitable Extinguishing Media	Not determined
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.
Specific Hazards Arising from the Chemical	Product is not combustible or an explosive.
Fire Explosion	None expected under ordinary conditions. Closed containers may rupture if exposed to fire or extreme heat. May produce toxic fumes if burning.
Hazardous Decomposition Products	On decomposition, product releases oxygen which may intensify fire

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective gloves/protective clothing/eye protection/face protection.

Environmental Precautions Avoid dispersal of spilled material and runoff and contact with waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers or waterways).

GENERAL PROCEDURES: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and material for containment and cleaning up

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

Methods for Clean-Up **SMALL SPILL:** Contain spilled material if possible. Absorb with materials such as: Non-combustible material. Collect in suitable and properly labeled containers.

LARGE SPILL: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.

7. HANDLING AND STORAGE

Precautions for safe handling

Use only in a well ventilated area.

Do not get in eyes. Do not swallow. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. See section 8, Exposure Controls and Personal Protection.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a segregated and approved area in original container protected from sunlight in a dry, cool and well-ventilated and approved area away from incompatible materials. Keep container closed to prevent drying out. Move container away from oxidizing materials. Use appropriate containment to avoid environmental contamination.

Contact with incompatible materials. Avoid UV light, excessive heat, and strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines No exposure limits noted for ingredient(s). The following information is given as general guidance

Appropriate engineering controls

Engineering Controls Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only adequate ventilation. Local exhaust ventilation may be necessary for some operations. Refer to "Industrial Ventilation" by ACGIH for a manual of recommended practices.

Individual protection measures, such as personal protective equipment

Eye/Face Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required.
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Use appropriate eye protection,

Hand Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection *Distribution, Workplace and Household Settings:*
No special protective equipment required
Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of inadequate ventilation wear respiratory protection

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear light golden solution.
Color	Clear yellow characteristic color.
Odor	Bleach odor
Odor Threshold	Not Determined
Property	Values
pH	>13
Melting Point/Freezing Point	-23.3 °C / 10 °F
Boiling Point/Boiling Range	>110 °C / 230 °F
Flash Point	> 93°C (200°F)
Evaporation Rate	N/A
Flammability (Solid, Gas)	Not Flammable
Upper Flammability Limits	N/A
Lower Flammability Limit	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Specific Gravity	1.299
Density	10.81
Water Solubility	Completely soluble in water
Solubility in other solvents	N/A
Partition Coefficient	N/A
Auto-ignition Temperature	N/A
Decomposition Temperature	N/A
Viscosity	1.75 to 2.5 cPs
Explosive Properties	Not an explosive
Oxidizing Properties	N/A

10. STABILITY AND REACTIVITY

Reactivity	Not reactive under normal conditions.
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	The addition of strong acids.
Incompatible Materials	Contact with incompatible materials. Avoid UV light, excessive heat, and strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines
Hazardous Decomposition Products	Oxygen which supports combustion.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

ACUTE TOXICITY

DERMAL LD50: > 2 g/kg

Notes: Rabbit

ORAL LD50: 3-5 g/kg

Notes: Rat

INHALATION LC50: No data available. Contact Env. Dept.

SERIOUS EYE DAMAGE/IRRITATION: Corrosive

Symptoms

Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Bioaccumulation/Accumulation: Based on test results, as well as theoretical considerations, the potential for bioaccumulation may be low.

Aquatic Toxicity (Acute): This product is expected to be harmful to aquatic organisms according to GHS criteria.

96-HOUR LC50: > 0.22 mg/l- Fathead Minnow

Notes: Sodium hypochlorite is highly toxic to freshwater fish.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

UN-No UN1791
 Proper Shipping Name HYPOCHLORITE SOLUTIONS
 Hazard Class: 8
 Packing Group: III

TDG

UN-No UN1791
 Proper Shipping Name HYPOCHLORITE SOLUTIONS
 Hazard Class: 8
 Packing Group: III

IATA

UN-No UN1791
 Proper Shipping Name HYPOCHLORITE SOLUTIONS
 Hazard Class: 8
 Packing Group: III

IMDG/IMO

UN-No UN1791
 Proper Shipping Name HYPOCHLORITE SOLUTIONS
 Hazard Class: 8
 Packing Group: III

15. REGULATORY INFORMATION

International Inventories

Legend:

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

Chemical Name	CAS
Hypochlorous Acid, Sodium Salt	7681-52-9

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

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Not determined

US State Regulations

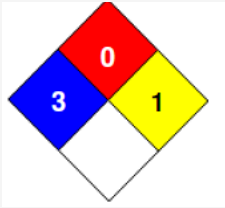
California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Not determined

16. OTHER INFORMATION



NFPA

HMIS Rating

Health	3
Flammability	0
Physical Hazard	1
Personal protection	--

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Revision Note: New format

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet