

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name 5000-Sc Discharge Solution
Revision date 11-21-2011
Version # 01
CAS # Mixture
Product use As part of the process of making 5000-SC Cleaning solution, the machine modifies naturally occurring minerals present in all waters to a somewhat acidic form. Waters around the world vary significantly in their elemental make up but prevalent minerals are sulfates such as potassium and sodium sulfate, carbonates in the form of magnesium and calcium, sodium or potassium chloride. The acidified minerals are present in low concentration which pose no recorded medical risk.

Manufacturer/Supplier Orbio Technologies
701 North Lilac Drive
Minneapolis, MN 55440-1452
USA

Emergency CHEMTREC: 1-800-424-9300 (24 hrs)
CANADA: CANUTEC (613) 996-6666 (24 hrs)

2. Hazards Identification

Physical state Liquid.
Appearance Clear, colorless liquid.
Emergency overview Low hazard for usual industrial or commercial handling by trained personnel.
OSHA regulatory status This material is not considered hazardous by the OSHA Hazard Communication Standard, OSHA 29 CFR 1910.1200.

Potential health effects

Routes of exposure Eye contact.

Eyes Under normal conditions of intended use, this material does not pose a eye hazard. Independent testing has shown the 5000-Sc output is non-irritating.

Skin Under normal conditions of intended use, this material does not pose a skin hazard. Independent testing has shown the 5000-Sc output is non-irritating.

Inhalation Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Ingestion Under normal conditions of intended use, this material does not pose a risk to health.

Target organs None known.

Chronic effects No other specific acute or chronic health impact noted.

Signs and symptoms None known.

Potential environmental effects This material is not expected to be harmful to aquatic life.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Water	7732-18-5	> 99
Sodium chloride	7647-14-5	0.2 - 0.4
Hypochlorous acid	7790-92-3	< 0.005
Chloric acid	7790-93-4	< 0.0002
Ozone	10028-15-6	< 0.0002
Sulfuric acid	7664-93-9	< 0.0002

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures

Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Skin contact	Wash contact areas with soap and water. Get medical attention if irritation develops or persists.
Inhalation	Move to fresh air. Get medical attention if any discomfort occurs.
Ingestion	Rinse mouth thoroughly with water and give large amounts of milk or water, if person is conscious. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.

Notes to physician Treat symptomatically.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties The product is not flammable.

Extinguishing media

Suitable extinguishing media Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media No restrictions known.

Protection of firefighters

Specific hazards arising from the chemical No unusual fire or explosion hazards noted.

Protective equipment and precautions for firefighters Use protective equipment appropriate for surrounding materials.

Fire fighting equipment/instructions Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

Hazardous combustion products None known.

6. Accidental Release Measures

Personal precautions No special precautions are necessary beyond normal good hygiene practices. See Section 8 of the MSDS for additional personal protection advice when handling this product.

Environmental precautions No special environmental precautions required.

Methods for containment None necessary.

Methods for cleaning up Absorb spillage with suitable absorbent material. For waste disposal, see Section 13 of the MSDS.

Never return spills to original containers for re-use.

Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Handle and open container with care. Observe good industrial hygiene practices.

Storage Store in original container.

8. Exposure Controls / Personal Protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Engineering controls No particular ventilation requirements.

Personal protective equipment

Eye / face protection Glasses are not required. Independent testing has shown the 5000-Sc output is non-irritating. Wear approved safety glasses as a good hygiene practice.

Skin protection Gloves are not required. Independent testing has shown the 5000-Sc output is non-irritating. Wear suitable gloves as a good hygiene practice.

Respiratory protection No specific recommendations.

General hygiene considerations Wash hands after handling.

9. Physical & Chemical Properties

Appearance	Clear, colorless liquid.
Color	Clear, colorless.
Odor	Slight Ozone/Chlorine Odor
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	2 - 4
Melting point	Not available.
Freezing point	Not available.
Boiling point	Not available.
Flash point	> 199 °F (> 92.8 °C) Closed Cup
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	0.0212 atm
Vapor density	Not available.
Specific gravity	Not available.
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Bulk density	1000 kg/m ³

10. Chemical Stability & Reactivity Information

Chemical stability	This product is stable under expected conditions of use.
Conditions to avoid	Freezing. Excessive heat.
Incompatible materials	None known.
Hazardous decomposition products	None known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects	Under normal conditions of intended use, this material does not pose a risk to health. However: Direct contact with eyes may cause temporary irritation. Prolonged contact may cause dryness of the skin.
Local effects	None known.
Sensitization	Not a skin sensitizer.
Chronic effects	No other specific acute or chronic health impact noted.
Carcinogenicity	Not classified.
Epidemiology	Not available.
Mutagenicity	Not classified.
Neurological effects	Not available.
Reproductive effects	Not classified.
Teratogenicity	Not available.
Symptoms and target organs	None known.
Further information	Not available.

12. Ecological Information

Ecotoxicity	Not expected to be harmful to aquatic organisms.
Environmental effects	None known.
Persistence and degradability	The product is biodegradable.
Bioaccumulation / Accumulation	Not expected to bioaccumulate on the basis of the low octanol-water partition coefficient.
Partition coefficient (n-octanol/water)	Not available.
Mobility in environmental media	The product is soluble in water.

13. Disposal Considerations

Waste codes	Not regulated.
Disposal instructions	Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	No special precautions.

14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

TDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
-------------------------------	---

TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)

Not regulated.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
--------------------------	--

Section 302 extremely hazardous substance (40 CFR 355, Appendix A) No

Section 311/312 (40 CFR 370) No

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)	Not controlled
--	----------------

Canadian regulations	This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.
-----------------------------	---

WHMIS status	Non-controlled
---------------------	----------------

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Sulfuric acid (CAS 7664-93-9) Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Sulfuric acid (CAS 7664-93-9) Listed: March 14, 2003 Carcinogenic.

Mexico regulations This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.

Issue date 11-21-2011