

# SAFETY DATA SHEET

## Section 1: Identification of the substance/mixture and of the company/undertaking

### Product identifier

**Trade name or designation of the mixture** 5000-Sc Discharge Solution  
**Registration number** -  
**Synonyms** None.  
**Date of first issue** 21-November-2011  
**Version number** 01  
**Revision date** -  
**Supersedes date** -

### Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** 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.

**Uses advised against** None known.

### Details of the supplier of the safety data sheet

#### Supplier

**Company name** Orbio Technologies  
**Address** 4232 Park Glen Rd, Minneapolis, MN 55416  
USA  
**e-mail** reid.rabon@tennantco.com  
**Contact person** Not available.  
**Emergency telephone number** +001-703-527-3887 (24hr)

## Section 2: Hazards identification

### Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

#### Hazard summary

**Physical hazards** Not classified for physical hazards.  
**Health hazards** Not classified for health hazards.  
**Environmental hazards** Not classified for hazards to the environment.  
**Specific hazards** No hazards resulting from the material as supplied. However: Direct contact with eyes may cause temporary irritation. Prolonged contact may cause dryness of the skin.  
**Main symptoms** None known.

#### Label elements

#### Label according to Directive 67/548/EEC or 1999/45/EC as amended

**Supplemental label information** None.  
**Other hazards** Not assigned.

## Section 3: Composition/information on ingredients

### Mixture

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Water	> 99	7732-18-5 231-791-2	-	-	

**Classification:** -

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Sodium chloride	0.2 - 0.4	7647-14-5 231-598-3	-	-	
<b>Classification:</b>	-				
Hypochlorous acid	< 0.005	7790-92-3 232-232-5	-	-	
<b>Classification:</b>	-				
Chloric acid	< 0.0002	7790-93-4 232-233-0	-	-	
<b>Classification:</b>	-				
Ozone	< 0.0002	10028-15-6 233-069-2	-	-	
<b>Classification:</b>	-				
Sulfuric acid	< 0.0002	7664-93-9 231-639-5	-	016-020-00-8	
<b>Classification:</b>	C;R35				

#: This substance has workplace exposure limit(s).

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The full text for all R-phrases is displayed in Section 16.

## Section 4: First aid measures

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

### Description of first aid measures

**Inhalation** Move to fresh air. Get medical attention if any discomfort occurs.

**Skin contact** Wash contact areas with soap and water. Get medical attention if irritation develops or persists.

**Eye contact** Flush thoroughly with water. If irritation occurs, get medical assistance.

**Ingestion** Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.

**Most important symptoms and effects, both acute and delayed** None known.

**Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

## Section 5: Firefighting measures

**General fire hazards** This product is not flammable.

### Extinguishing media

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

**Unsuitable extinguishing media** No restrictions known.

**Special hazards arising from the substance or mixture** No unusual fire or explosion hazards noted.

### Advice for firefighters

**Special protective equipment for firefighters** Use protective equipment appropriate for surrounding materials.

**Special firefighting procedures** 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.

## Section 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

<b>For emergency responders</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
<b>Environmental precautions</b>	No special environmental precautions required
<b>Methods and material for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.  Small Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Clean surface thoroughly to remove residual contamination. Wipe up with absorbent material (e.g. cloth, fleece).  Never return spills in original containers for re-use. For waste disposal, see Section 13.
<b>Reference to other sections</b>	Not available.

## Section 7: Handling and storage

<b>Precautions for safe handling</b>	Handle and open container with care. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original container.
<b>Specific end use(s)</b>	Not available.

## Section 8: Exposure controls/personal protection

<b>Control parameters</b>	
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Recommended monitoring procedures</b>	Not available.
<b>DNEL</b>	Not available.
<b>PNEC</b>	Not available.
<b>Exposure controls</b>	
<b>Appropriate engineering controls</b>	No particular ventilation requirements.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>General information</b>	Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Eye/face protection</b>	Glasses are not required. Independent testing has shown the 5000-Sc output is non-irritating. Wear approved safety glasses as a good hygiene practice.
<b>Skin protection</b>	
<b>- Hand protection</b>	Gloves are not required. Independent testing has shown the 5000-Sc output is non-irritating. Wear suitable gloves as a good hygiene practice.
<b>- Other</b>	Gloves are not required. Independent testing has shown the 5000-Sc output is non-irritating. Wear suitable gloves as a good hygiene practice.
<b>Respiratory protection</b>	No specific recommendations.
<b>Thermal hazards</b>	Not available.
<b>Hygiene measures</b>	Wash hands after handling.
<b>Environmental exposure controls</b>	Environmental manager must be informed of all major spillages.

## Section 9: Physical and chemical properties

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear, colorless liquid.
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Colour</b>	Clear, colorless.
<b>Odour</b>	Slight Ozone/Chlorine Odor
<b>Odour threshold</b>	Not available.
<b>pH</b>	2 - 4
<b>Melting point/freezing point</b>	Not available.
<b>Boiling point, initial boiling point, and boiling range</b>	Not available.
<b>Flash point</b>	> 92.8 °C (> 199 °F) Closed cup

<b>Auto-ignition temperature</b>	Not applicable.
<b>Flammability (solid, gas)</b>	Not available.
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Oxidising properties</b>	Not applicable.
<b>Explosive properties</b>	Not applicable.
<b>Explosive limit</b>	Not applicable.
<b>Vapour pressure</b>	0.0212 atm
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Relative density</b>	Not available.
<b>Solubility (water)</b>	Soluble
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Bulk density</b>	1000 kg/m <sup>3</sup>
<b>Viscosity</b>	Not available.
<b>Percent volatile</b>	Not available.
<b>Other information</b>	No relevant additional information available.

## Section 10: Stability and reactivity

<b>Reactivity</b>	Not available.
<b>Chemical stability</b>	This product is stable under expected conditions of use.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur.
<b>Conditions to avoid</b>	Freezing. Excessive heat.
<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	None known.

## Section 11: Toxicological information

<b>General information</b>	Not available.
<b>Information on likely routes of exposure</b>	
<b>Ingestion</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>Inhalation</b>	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
<b>Skin contact</b>	Under normal conditions of intended use, this material does not pose a skin hazard.
<b>Eye contact</b>	Under normal conditions of intended use, this material does not pose a eye hazard.
<b>Symptoms</b>	None known.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	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.
<b>Skin corrosion/irritation</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Respiratory sensitisation</b>	Not available.
<b>Skin sensitisation</b>	Not available.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not available.

<b>Aspiration hazard</b>	Not available.
<b>Mixture versus substance information</b>	Not available.
<b>Other information</b>	Not available.

## Section 12: Ecological information

<b>Toxicity</b>	No toxicity data noted for the ingredient(s).
<b>Persistence and degradability</b>	The product is biodegradable.
<b>Bioaccumulative potential</b>	Not expected to bioaccumulate on the basis of the low octanol-water partition coefficient.
<b>Mobility</b>	Not available.
<b>Environmental fate - Partition coefficient</b>	Not available.
<b>Mobility in soil</b>	Not available.
<b>Results of PBT and vPvB assessment</b>	Not available.
<b>Other adverse effects</b>	Not available.

## Section 13: Disposal considerations

### Waste treatment methods

<b>Residual waste</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	No special precautions.
<b>EU waste code</b>	16 05 09
<b>Disposal methods/information</b>	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.

## Section 14: Transport information

### ADR

The product is not covered by international regulation on the transport of dangerous goods.

### RID

The product is not covered by international regulation on the transport of dangerous goods.

### ADN

The product is not covered by international regulation on the transport of dangerous goods.

### IATA

The product is not covered by international regulation on the transport of dangerous goods.

### IMDG

The product is not covered by international regulation on the transport of dangerous goods.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

## Section 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulations

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex I**

Not listed.

**Regulation (EC) No. 2037/2000 on substances that deplete the ozone layer, Annex II**

Not listed.

**Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V**

Not listed.

**Directive 96/61/EC concerning integrated pollution prevention and control (IPPC): Article 15, European Pollution Emission Registry (EPER)**

Not listed.

**Regulation (EC) No. 1907/2006, REACH Article 59(1). Candidate List**

Not listed.

<b>Other regulations</b>	The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. The product does not need to be labelled in accordance with EC directives or respective national laws.
<b>National regulations</b>	Not available.
<b>Chemical safety assessment</b>	No Chemical Safety Assessment has been carried out.

**Section 16: Other information**

<b>List of abbreviations</b>	DNEL: Derived No-Effect Level. PNEC: Predicted No-Effect Concentration. PBT: Persistent, bioaccumulative and toxic. vPvB: Very Persistent and very Bioaccumulative.
<b>References</b>	Not available.
<b>Information on evaluation method leading to the classification of mixture</b>	The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.
<b>Wording of the R-phrases in sections 2 and 3</b>	R35 Causes severe burns.
<b>Training information</b>	Not available.
<b>Disclaimer</b>	The information in the sheet was written based on the best knowledge and experience currently available.
<b>Issue date</b>	21-November-2011
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