



Safety Data Sheet

Date Revised: 10/6/17

This Safety Data Sheet complies with the standards and regulatory requirements of the United States and may not meet the regulatory requirements of other countries.

Section 1: Product and Company Identification

Product Name:	<i>RT Solution</i>
Distributor:	Total Services Group 11718 S. Brisbane Dr. Sandy, UT 84094
Company & Emergency Phone:	801.540.0717
Manufacturer:	Advanced Resonance Solutions LLC, Ogden, Utah
Use:	<i>RT Solution</i> is used as a scale control/removal cleansing treatment for all surfaces in water conveyances and distribution systems.

Section 2: Hazards Identification

Emergency Overview:

State of Matter:	Liquid
Color:	Clear
Odor:	Slight chlorine odor

Potential Health Effects:

Primary routes of exposure:

Eye:	Contact with eye tissues with liquid may cause slight irritation.
Inhalation:	Inhalation of high vapor concentrations may cause shortness of breath and/or irritation of mucous membranes.
Ingestion:	May cause gastrointestinal irritation.
Target Organs:	Eyes and mucous membranes

This material is considered not hazardous to health by OSHA Hazard Communication Standard (29 CFR 1910.1200). NSF/ANSI Standard 60 Certified.

Potential of low concentrations of chlorine gas if mixed with acids or other low pH solutions.



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Section 3: Composition/Information on Ingredients

Component	CAS#	% by Weight
Sodium Hypochlorite	7681-52-9	0.02-0.08
Sodium Bicarbonate	144-55-8	0.01-1.00
Processed Water	7732-18-5	99.97-98.92

Section 4: First Aid Measures

Eye Contact:	Flush with clean water immediately .
Skin Contact:	Rinse affected area.
Inhalation:	Move to fresh air.
Ingestion:	Drink plenty of water.

Section 5: Firefighting Measures

Flammable Properties

Flammability of Product:	Nonflammable
Suitable Extinguishing media:	Use what is appropriate for the fire.
Firefighting Instructions:	No special instructions.

Section 6: Accidental Release Measures

Safeguards (Personnel):	No protective equipment required.
Spill Cleanup:	Treat as nonhazardous. Allow to evaporate in place. Avoid mixing with acids. (Potential of low concentrations of chlorine gas if mixed with acids or other low pH solutions).
Accidental Release Measures:	Treat as nonhazardous. No special measures required.



Section 7: Handling and Storage

Handling (Personnel):	Avoid mixing with acids. (Potential of low concentrations of chlorine gas if mixed with acids or other low pH solutions.)
Storage:	Store opaque drums in cool areas out of direct sunlight (product degrades in presence of ultraviolet light). Refrigerate if possible for longest life.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:	Treat as nonhazardous. No exposure or engineering controls needed.
Personal Protective Protection:	
Respiratory:	Protection not required.
Skin and Body Protection:	Protection not required.
Eye Protection:	Protection not required.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	Colorless
Odor:	Slight chlorine
Odor Threshold:	Not available
Vapor Pressure:	17.54 mmHg @ 68° F (20° C)
Vapor Density:	17.3 gm/m3 @ 68° F (20° C)
pH:	6.5-7.5
Freezing Point:	≈ 30° F
Boiling Point:	≈ 212° F
Solubility (water):	100%
Flash Point:	Not applicable
Specific Gravity:	1.0 @ 68° F (20° C)
Evaporation Rate:	40g/m2/hr @ 68° F (20° C)
Flammability (solid, gas):	Not flammable
Upper/Lower Flammability Limits:	Not applicable
Partition Coefficient (n-octanol/water):	No data available
Auto-ignition Temperature:	Not applicable
Percent Volatile, wt. %:	99.9
Volatile Organic Compound (VOC) Content, wt. %:	0



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Section 10: Stability and Reactivity

Conditions to Avoid:	Excessive heat and direct sunlight. (Keep in opaque containers.)
Incompatible Materials:	Acids or other low pH solutions.
Hazardous Decomposition Products:	Low concentrations of hydrochloric acid.
Possibility of Hazardous Reactions:	Reaction with acids or low pH solutions may create low concentrations of chlorine gas.
Polymerization:	Polymerization will not occur.

Section 11: Toxicological Information

Accute Effects:	
Oral LD50:	>5,000mg/kg (rats)
Inhalation LC50:	>2.30 mg/L (rats)
Eye Irritation:	Nonirritating (rabbits)
Skin Irritation:	Nonirritating (rabbits)
Sensitization:	No sensitizing reaction (guinea pigs)
Chronic Effects:	
Carcinogenicity:	Found to be noncarcinogenic in accordance with OSHA, NTP, and IARC standards.
Mutagenicity, Reproductive Effects, Developmental Effects:	No data

Section 12: Ecological Information

Eco-toxicity:	No data available
Persistence/Degradability/Accumulation:	No data available
Mobility in Environment:	Free flowing liquid similar to water
Environmental Fate:	Degrades rapidly



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Section 13: Disposal Considerations

Waste Disposal:

Allow to evaporate in place. Dispose of in accordance with existing federal, state, and local environmental regulations.

Section 14: Transport Information

US DOT:

Title 49, Section 172, this product is nonlisted. It is NOT considered hazardous to health.

ICAO, IMDG, TDG:

See US DOT

Section 15: Regulatory Information

NSF/ANSI Standard 60:

Listed

OSHA:

Considered NOT hazardous to health by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Section 16: Other Information

NFPA Hazard Rating:

Health:	0
Fire:	0
Reactivity:	0
Specific Hazard:	0

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