



## SOLVE 88

### Material Safety Data Sheet

Date Issued: 10/01/2007

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#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Solve 88**

COMPANY: **WaterSolve, LLC, 4964 Starr St S. E., Grand Rapids, MI 49546, USA**

For Product information call **616-575-8693**.

EMERGENCY PHONE: For emergency involving spill, leak, fire, exposure or accident call  
CHEMTREC: 1-800-424-9300. Outside the USA and Canada call 703-527-3887.

NFPA Rating

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

HMIS rating

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

#### EMERGENCY OVERVIEW

Clear to slightly hazy, colorless to yellow liquid with no odor. May cause skin and eye irritation that can become severe on prolonged contact. May be harmful if swallowed. Inhalation of spray or mist may irritate respiratory track.

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	% WT/WT	PEL	TLV
Aluminum metal, (as Al)		100	*15 mg/m <sup>3</sup> (TD) *5 mg/m <sup>3</sup> (RF)	*2 mg/m <sup>3</sup> (TWA) Soluble Salts

#### 3. HAZARDS IDENTIFICATION

##### INHALATION:

Inhalation of mist or spray may irritate respiratory tract.

##### SKIN CONTACT:

May cause skin irritation, especially on prolonged contact.

##### SKIN ABSORBTION:

No Data

##### EYE CONTACT:

Direct eye contact may cause irritation, redness, and swelling. Prolonged exposure to Aluminum slats may cause conjunctivitis.

##### INGESTION:

May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

##### ACUTE OVEREXPOSURE:

Possible eye, skin, and respiratory tract irritation.



**CHRONIC OVEREXPOSURE:**

May aggravate existing skin, eye, and lung conditions. Persons with kidney disorders have an increased risk from exposure based on general information found on aluminum salts.

**4. FIRST AID MEASURES**

**Ingestion:**

If swallowed, call a physician immediately. Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

**Skin Contact:**

Remove contaminated clothing and shoes without delay. Wash immediately with plenty of water. Do not reuse contaminated clothing without laundering. Get medical attention if pain of irritation persists after washing or if signs and symptoms of overexposure appear.

**Eye Contact:**

Rinse immediately with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek medical attention.

**Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. Obtain medical advice if there are persistent symptoms.

**Notes to physician:**

Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

**5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:**

Use water spray, carbon dioxide or dry chemical or foam.

**Special Hazards:**

Keep containers cool by spraying with water if exposed to fire. May produce hazardous fumes or hazardous decomposition products.

**Fire Fighting Procedures:**

Product is a water solution and nonflammable. In a fire, this product may build up pressure and rupture a sealed container; cool exposed containers with water spray. Use self-contained breathing apparatus in confined areas; avoid breathing vapors or dust.

**Flashpoint:** NAPL  
**Autoignition Temp:** NAPL  
**Lower flammability limit:** NAPL  
**Upper flammability limit:** NAPL



## 6. **ACCIDENTAL RELEASE MEASURES**

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Stop leaks. Clean up immediately. Build dikes as necessary to contain flow of large spills. Do not allow liquid to enter stream or waterways. For small spills, use soda ash to neutralize, an inert material to absorb, or wash product to a chemical sewer. Place contaminated materials into containers and store in a safe place to await proper disposal. Wear adequate personal protective clothing and equipment. Caution use of soda ash may generate carbon dioxide gas. Provide adequate ventilation to spill area. Approved breathing apparatus may be necessary.

## 7. **HANDLING AND STORAGE**

**CAUTION! CORROSIVE LIQUID!  
MAY CAUSE IRRITATION!  
FOR INDUSTRIAL USE ONLY!**

Precautionary Measures: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Avoid breathing mist or spray. Use with adequate ventilation and employ respiratory protection where mist or spray may be generated. Wear chemical splash goggles, gloves, and protective clothing when handling. Wash thoroughly after handling. May be harmful if swallowed or inhaled. Keep away from heat and open flame. Keep container closed when not in use.

### STORAGE

Store in a cool, dry place away from direct heat. Keep container tightly closed when not in use. Do not store in unlined metal containers. Product may slowly corrode iron, brass, copper, aluminum and stainless and mild steel.

## **EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Engineering Measures:

Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure.

### Respiratory Protection:

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposures exceed the established exposure limit, use respiratory protection recommended for the material and level of exposure. When exposures exceed the PEL, use NOISH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134.

### Eye Protection:

Wear eye/face protection such as chemical splash proof goggles or face shield. Eyewash equipment and safety shower should be provided in areas of potential exposure.

### Skin Protection:



Avoid skin contact. Wear impermeable gloves and suitable protective clothing.

Additional Advice :

Food, beverages and tobacco products should not be carried, stored or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands thoroughly with soap and water. Standard work clothing and work shoes. Safety shower and eye wash located in immediate area.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance and Odor:	Clear to slightly hazy, colorless to yellow colored liquid
Odor:	No appreciable odor
Boiling Point:	~ 220°F (104°C)
Melting Point:	Not appreciable
Freezing Point:	-19°F (-7°C)
Vapor Pressure:	Not available
Specific Gravity:	1.311 – 1.331
Vapor Density:	Not applicable
Density @25°C	10.94-11.10
% Volatile (By Wt):	50-65%
Viscosity	<50 cps
pH:	2 – 3 (as is)
Saturation in Air (% by Vol):	Not applicable
Evaporation Rate:	no available
Solubility in Water:	Complete
Flammable Limits (% by vol):	Not available
Autoignition temp:	Not available
Decomposition temp:	Not available
Odor Threshold	Not available

**10. STABILITY AND REACTIVITY**

Stability:	Stable
Conditions to avoid:	None known
Polymerization:	Will not occur
Incompatible Materials	incompatible with alkalis

Hazardous decomposition  
Products: Thermal decomposition may release toxic and/or hazardous gases  
Such as aluminum, C12, and HCl.

**5. TOXICOLOGICAL INFORMATION**

**Test data is based on a product of similar composition.**  
**Conclusions are drawn from sources other than direct testing.**

This product is expected to be an irritant to the skin, eyes and mucous membrane. Irritation may become severe on prolonged contact.



**ECOLOGICAL INFORMATION LC 50**

BOD5:	mg O2/mg:	NAV
	Ppm	NAV
	Biodegradable %	NAV
BOD28:	mg O2/mg:	NAV
	Ppm	NAV
	Biodegradable %	NAV
COD:	mg O2/mg:	NAV
	Ppm	NAV
	Biodegradable %	NAV

Aquatic Toxicity:  
Not available

**13. DISPOSAL CONSIDERATIONS**

Dispose of in accordance with all applicable federal, state and local regulations.

**14. TRANSPORT INFORMATION**

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

DOT Proper Shipping Name:  
UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (POLYALUMINUM CHLORIDE SOLUTION), 8, UN3264, PG III, erg #154

Harmonized Tariff Schedule Number: 3824.90.9290

**15. REGULATORY INFORMATION**

**OTHER ENVIRONMENTAL INFORMATION**

This product does not contain any ingredients subject to the reporting requirements of SARA Title III, Section 313 (40 CFR Part 372)

SARA Section 311/312: Acute Health Hazard  
TSCA: Components found in TSCA Inventory.

**16. OTHER INFORMATION**

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.

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