

## SAFETY DATA SHEET

Preparation Date: 07/23/2015

Revision date 11/11/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** R-100  
**Product Name:** RESORCINOL TS, (U.S.P. TEST SOLUTION)

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** Mixture  
**RTECS #** Not available  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Corrosive to metals	Category 1

#### Label elements

**Danger**

#### **Hazard statements**

Harmful if swallowed or if inhaled  
 Causes severe skin burns and eye damage

May cause respiratory irritation  
May cause damage to organs through prolonged or repeated exposure  
May be corrosive to metals



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Do not breathe mist or vapors  
Wear protective gloves/protective clothing/eye protection/face protection  
Keep only in original container

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or physician*  
Absorb spillage to prevent material damage  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. Immediately call a POISON CENTER or physician.  
IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed  
Store in corrosive resistant/ .? container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Water	7732-18-5	62.37
Hydrogen chloride	7647-01-0	36.63
Resorcinol	108-46-3	1

## 4. FIRST AID MEASURES

### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.
- Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.
- Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

### Most important symptoms and effects, both acute and delayed

- Symptoms**
- Severe skin irritation
  - Causes severe skin burns
  - Severe eye irritation
  - Causes eye damage
  - Causes eye burns
  - Causes chemical burns to the respiratory tract
  - Can burn mouth, throat, and stomach
  - Nausea
  - May cause diarrhea
  - May affect behavior/central nervous system
  - May affect the liver
  - It may affect the kidneys
  - May affect the cardiovascular system

### Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### **Suitable Extinguishing Media:**

The product itself does not burn. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire. Cool affected containers with flooding quantities of water.

**Unsuitable Extinguishing Media:**

No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products**

No information available.

**Specific hazards**

Contact with metals may evolve flammable hydrogen gas. Calcium carbide reacts with hydrogen chloride gas with incandescence. Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine. Rubidium acetylene carbide burns with slightly warm Hydrochloric acid. Lithium silicide in contact with hydrogen chloride becomes incandescent. When dilute hydrochloric acid is used, gas that is spontaneously flammable in air is evolved. Magnesium boride treated with concentrated hydrochloric acid produces spontaneously flammable gas. Cesium acetylene carbide burns in hydrogen chloride gas. Cesium carbide ignites in contact with Hydrochloric acid unless acid is dilute. Hydrogen chloride in contact with the following can cause an explosion or ignition on contact, or other violent/vigorous reaction: Acetic anhydride AgClO + CCl<sub>4</sub> Alcohols + hydrogen cyanide, Aluminum Aluminum-titanium alloys (with HCl vapor), 2-Amino ethanol, Ammonium hydroxide, Calcium carbide Ca<sub>3</sub>P<sub>2</sub> Chlorine + dinitroanilines (evolves gas), Chlorosulfonic acid Cesium carbide Cesium acetylene carbide, 1,1-Difluoroethylene Ethylenediamine, Ethyleneimine, Fluorine, HClO<sub>4</sub> Hexalithium disilicide H<sub>2</sub>SO<sub>4</sub> Metal acetylides or carbides, Magnesium boride, Mercuric sulfate, Oleum, Potassium permanganate, beta-Propiolactone Propylene oxide Rubidium carbide, Rubidium, acetylene carbide Sodium (with aqueous HCl), Sodium hydroxide Sodium tetraselenium, Sulfonic acid, Tetraselenium tetranitride, U<sub>3</sub>P<sub>4</sub>, Vinyl acetate. Silver perchlorate with carbon tetrachloride in the presence of hydrochloric acid produces trichloromethyl perchlorate which detonates at 40 deg. C.

**Special Protective Actions for Firefighters**

**Specific Methods:**

No information available

**Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Neutralize the residue with a dilute solution of sodium carbonate. Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

**Safe Handling Advice:**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Keep containers tightly closed in a cool, well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Store away from incompatible materials.

**Incompatible Materials:**

Metals  
Bases  
Amines  
Alkali Metals  
Oxidizing agents  
Fluorine  
Carbides  
Sodium  
Vinyl acetate  
Alkalis  
acetylides  
metal oxides  
Aluminum  
sulfides  
carbonates  
Cyanides

Phosphides  
borides  
Aldehydes  
epoxides  
Copper  
Copper alloys  
Brass  
Lithium silicide  
Zinc  
galvanized materials  
hydroxides  
Sulfuric acid  
chlorates  
Nitric acid  
Organic materials  
Silicon dioxide

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

##### United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	5 ppm Ceiling 7 mg/m <sup>3</sup> Ceiling	5 ppm Ceiling 7 mg/m <sup>3</sup> Ceiling	2 ppm Ceiling	None
Resorcinol	108-46-3	None	10 ppm TWA 45 mg/m <sup>3</sup> TWA 20 ppm STEL 90 mg/m <sup>3</sup> STEL	20 ppm STEL 10 ppm TWA	Not determined

##### Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	2 ppm Ceiling 3 mg/m <sup>3</sup> Ceiling	2 ppm Ceiling	2 ppm Ceiling	5 ppm Ceiling 7.5 mg/m <sup>3</sup> Ceiling
Resorcinol	108-46-3	10 ppm TWA 45 mg/m <sup>3</sup> TWA 20 ppm STEL 90 mg/m <sup>3</sup> STEL	10 ppm TWA 20 ppm STEL	20 ppm STEL	10 ppm TWA 45 mg/m <sup>3</sup> TWA 20 ppm STEL 90 mg/m <sup>3</sup> STEL

##### Australia and Mexico

Component	CAS No	Australia	Mexico
Water	7732-18-5	None	None
Hydrogen chloride	7647-01-0	None	5 ppm Ceiling 7 mg/m <sup>3</sup> Ceiling
Resorcinol	108-46-3	20 ppm STEL 90 mg/m <sup>3</sup> STEL 10 ppm TWA 45 mg/m <sup>3</sup> TWA	10 ppm TWA 45 mg/m <sup>3</sup> TWA 20 ppm STEL 90 mg/m <sup>3</sup> STEL

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective

threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

<b>Eye protection:</b>	Face-shield.
<b>Skin and body protection:</b>	Full Suit Gloves Boots
<b>Respiratory protection:</b>	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
<b>Hygiene measures:</b>	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> Clear.	<b>Color:</b> Clear. Yellowish.
<b>Odor:</b> Pungent. Irritating.	<b>Taste</b> No information available.	<b>Formula</b> No information available
<b>Molecular/Formula weight (g/mole):</b> No information available	<b>Flammability (solid, gas)</b> no data available	<b>Flashpoint (°C/°F):</b> No information available
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> No information available	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> No information available
<b>Specific gravity:</b> 1.186 (Hydrochloric Acid) 1.2717 (Resorcinol)	<b>pH</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Freely soluble in water	

### 10. STABILITY AND REACTIVITY

#### Reactivity

No information available

#### Chemical stability

**Product code:** R-100

**Product name:** RESORCINOL TS,  
(U.S.P. TEST SOLUTION)

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**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** For Hydrogen chloride or Hydrochloric Acid:  
Reacts with most metals to produce flammable Hydrogen gas.  
Reacts violently with bases, oxidizers forming toxic chlorine gas.  
Reaction with oxidizers such as permanganates, chlorates, chlorites, and hypochlorites may produce chlorine or bromine gas.  
Reacts, often violently or vigorously or exothermically, with acetic anhydride, active metals, aliphatic amines, alkanolamines, alkylene oxides, aromatic amines, amides, 2-aminoethanol, ammonia, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, ethylene diamine, ethyleneimine, epichlorohydrin, isocyanates, metal acetylides, oleum, organic anhydrides, perchloric acid, 3-propiolactone, uranium phosphide, sulfuric acid, vinyl acetate, vinylidene fluoride, alcohols + hydrogen cyanide, Aluminum phosphide, Aluminum-titanium alloys, 2-Amino ethanol, Ammonium hydroxide, Ammonium, 1,4-Benzoquinone diimine, Cesium telluroacylated, Chlorine + dinitroanilines, Chloroacetaldehyde oxime, Cyanogen chloride, 1,1-Difluoroethylene, dinitroanilines, Ethylene, Ethyl 2-formylpropionate oxime, Hexalithium disilicide, Hydrogen peroxide, Methyl vinyl ether, Nitric acid + glycerol, Potassium, Potassium permanganate, beta-Propiolactone, Propylene oxide, Rubidium acetylide, Silver chlorite, Sodium 2-allyloxy-6-nitrophenylpyruvate oxime, Sodium hydroxide, Sodium terantride, 2,4,6-Tri(2-acetylhydrazino)-1,3,5-trinitrobenzene, Sulfonic acid, Cesium cyanotridecahydrodecarborate(2-), Potassium ferricyanide, Vinylidene fluoride, Potassium ferrocyanide, Ammonium hexacyanoferrate (II).  
Water reacts vigorously with alkali metals and with many organic materials.  
Sodium reacts very violently with gaseous hydrogen chloride.  
Calcium phosphide and Hydrochloric acid undergo a very energetic reaction.  
Hydrogen chloride reacts with oxidizers releasing chlorine gas.  
Hydrogen chloride gas is emitted when Hydrochloric acid comes in contact with Sulfuric acid.  
Adsorption of Hydrochloric acid onto Silicon dioxide results in exothermic reaction.  
Hydrogen chloride causes aldehydes and epoxides to violently polymerize.  
Cesium acetylene carbide burns in hydrogen chloride gas.  
Lithium silicide in contact with hydrogen chloride becomes incandescent.  
Rubidium acetylene carbide burns with slightly warm hydrochloric acid.  
Rubidium carbide ignites in contact with hydrochloric acid unless acid is dilute.  
Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine.  
Calcium carbide reacts with hydrogen chloride gas with incandescence.  
Absorption of gaseous hydrogen chloride on mercuric sulfate becomes violent @ 125 deg C.  
Reaction of silver perchlorate with carbon tetrachloride in presence of small amount of hydrochloric acid produces trichloromethyl perchlorate, which detonates @ 40 deg C.  
Cesium carbide ignites in contact with hydrochloric acid unless acid is dilute.  
Magnesium boride in contact with concentrated hydrochloric acid produces spontaneously flammable gas.  
Hydrochloric acid in the presence of alcohol and glycols results in dehydration reactions.  
Hydrogen chloride gas can react with formaldehyde to form bis(chloromethyl)ether, a human carcinogen.  
Attacks some plastics, rubber, and coatings.

**Conditions to avoid:** Incompatible materials.

**Incompatible Materials:** Metals  
Bases  
Amines  
Alkali Metals  
Oxidizing agents  
Fluorine  
Carbides  
Sodium  
Vinyl acetate  
Alkalis



acetylides  
metal oxides  
Aluminum  
sulfides  
carbonates  
Cyanides  
Phosphides  
borides  
Aldehydes  
epoxides  
Copper  
Copper alloys  
Brass  
Lithium silicide  
Zinc  
galvanized materials  
hydroxides  
Sulfuric acid  
chlorates  
Nitric acid  
Organic materials  
Silicon dioxide

**Hazardous decomposition products:**

Hydrogen chloride gas. Hydrogen, by reaction with metals.

**Other Information**

**Corrosivity:**

It attacks nearly all metals, with the exception of Mercury, Gold, Platinum, Tantalum, Silver and certain alloys  
Severe corrosive effect on Copper  
Severe corrosive effect on Copper and copper alloys  
Severe corrosive effect on 304 Stainless Steel  
Severe corrosive effect on 316 Stainless Steel  
Severe corrosive effect on Brass  
Severe corrosive effect on Bronze

**Special Remarks on Corrosivity:** No information available

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Principal Routes of Exposure:**

Skin. Inhalation. Ingestion.

**Acute Toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

**Component Information**

Water	
CAS No	7732-18-5

**LD50/oral/rat** = > 90 mL/kg Oral LD50 Rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available

**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

Hydrogen chloride	
CAS No	7647-01-0

**LD50/oral/rat** = 238 - 277 mg/kg Oral LD50 Rat  
700 mg/kg (test substance: 31.5% hydrochloric acid solution)  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = >5010 mg/kg (Test substance: 31.5% hydrochloric acid solution - from European Chemicals Bureau IUCLID dataset)  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 3124 ppm Inhalation LC50 Rat 1 h  
1562 ppm 4 h  
1.68 mg/L Inhalation LC50 Rat 1h  
**LC50/inhalation/mouse** = 1108 ppm 1 h  
**Other LD50 or LC50information** = 900 mg/kg oral LD50 Rabbit (no information on test substance)

Resorcinol	
CAS No	108-46-3

**LD50/oral/rat** = 202 mg/kg Oral LD50 Rat  
**LD50/oral/mouse** = 200 mg/kg  
**LD50/dermal/rabbit** = 3360 mg/kg Dermal LD50Rabbit  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = 21.3 mg/L Inhalation LC50 Rat 1 h  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50information** = No information available

#### Product Information

**LD50/oral/rat** =  
**Value - Acute Toxicity** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox** = No information available

**LD50/dermal/rabbit**  
**Value - Acute Toxicity** = No information available

**LD50/dermal/rat**  
**VALUE - Acute Tox** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available  
**VALUE - Dust/Mist** = No information available

#### Symptoms

**Skin Contact:** Corrosive. Severe skin irritation. Causes skin burns.

**Eye Contact:** Corrosive to the eyes and may cause severe damage including blindness. Severe eye irritation. Causes eye burns. Causes conjunctivitis. Causes corneal damage.

**Inhalation** Causes chemical burns to the respiratory tract. Symptoms may include nose,

throat, and laryngeal burning pain, upper respiratory tract edema and inflammation, coughing, sneezing, choking sensation, hoarseness, laryngeal spasms, chest pains, headaches, and palpitations. May cause headache. Can cause constriction of the larynx, glottal closure. Can cause broncho-constriction. Can cause dyspnea (shortness of breath and difficulty breathing). It may cause pulmonary edema. May cause chemical pneumonitis. Acute exposure via inhalation can cause erosion of tooth enamel.

**Ingestion**

Causes digestive or gastrointestinal tract burns. Ingestion may cause nausea, vomiting, diarrhea. May cause thirst. May cause salivation. May cause difficulty swallowing. May cause ulceration or perforation of the gastrointestinal tract. May affect the cardiovascular system (weak rapid pulse, tachycardia). May affect liver. May affect urinary system (kidneys). May affect respiration (shallow respiration). May cause esophageal, gastric, pyloric strictures or stenosis. May cause shock. May cause central nervous system effects (affect behavior). Acute Exposure via ingestion can cause erosion of tooth enamel.

**Aspiration hazard**

No information available.

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

**Chronic Toxicity**

Prolonged or repeated ingestion may affect the liver. Prolonged or repeated inhalation may affect the liver. Prolonged skin contact may cause skin irritation and/or dermatitis. Prolonged or repeated eye contact can cause conjunctivitis. Prolonged or repeated inhalation and/or ingestion may cause bleeding of the nose, bleeding of the nose, conjunctivitis, ulceration of oral mucosa, changes in pulmonary function, chronic bronchitis, overt respiratory tract anomalies. Prolonged or repeated inhalation and/or ingestion can cause yellowing of the teeth, and erosion of tooth enamel. Prolonged or repeated inhalation and/or ingestion may cause central nervous system effects (affect behavior). Prolonged or repeated ingestion may affect the kidneys. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated ingestion may affect the thyroid and result in thyroid hypofunction, goiter. Prolonged or repeated ingestion may cause weight loss. Prolonged or repeated ingestion may affect the thymus gland. Prolonged or repeated ingestion may affect the blood (changes in serum composition).

**Sensitization:**

No information available.

**Mutagenic Effects:**

May affect genetic material  
For Resorcinol:  
Experiments with bacteria and/or yeast have shown mutagenic effects

**Carcinogenic effects:**

May cause cancer based on animal test data. Not classifiable as to its carcinogenicity to humans.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Hydrogen chloride	7647-01-0	Group 3 - Not classifiable - Monograph 54 [1992]	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed
Resorcinol	108-46-3	Group 3 - Not Classifiable - Monograph 71 [1999]	A4 Not Classifiable as a Human Carcinogen	No information	No information	No information	No information

		Supplement 7 [1987] Monograph 15 [1977]					
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ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

**Reproductive toxicity**

No data is available

**Reproductive Effects:**

May cause adverse reproductive effects  
Experiments have shown reproductive toxicity effects on laboratory animals

**Developmental Effects:**

No information available

**Teratogenic Effects:**

No information available

**Specific Target Organ Toxicity**

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Target Organs:**

Lungs. Respiratory system. Skin. Eyes. Teeth.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:**

Aquatic environment.

*Hydrogen chloride - 7647-01-0*

**Fish**

282 mg/L LC50 *Gambusia affinis* 96 h

862 mg/L LC50 *Leuciscus idus*

**Crustacea**

<56 mg/L LC50 *Daphnia magna* 72h

*Resorcinol - 108-46-3*

**Algae/aquatic plants**

1.1 - 72 mg/L EC50 *Chlorella pyrenoidosa* 72 h

**Fish**

100 mg/L LC50 *Oncorhynchus mykiss* 96 h flow-through 1 53.4 mg/L LC50  
*Pimephales promelas* 96 h 1 36 - 100 mg/L LC50 *Pimephales promelas* 96 h  
static 1 100 mg/L LC50 *Pimephales promelas* 96 h flow-through 1 34.7 mg/L LC50  
*Leuciscus idus* 96 h static 1

**Crustacea**

78 mg/L LC50 *Daphnia magna* 48 h

**Persistence and degradability:**

No information available

**Bioaccumulative potential:**

No information available.

**Mobility in soil**

No information available

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	None	None	None	None
Resorcinol	108-46-3	None	None	None	U201

<b>14. TRANSPORT INFORMATION</b>
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**DOT**

**UN-No:** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Hazard Class** 8  
**Subsidiary Class** No information available  
**Packing group:** II  
**Emergency Response Guide Number** 157  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions** 386, A3, B3, B15, IB2, N41, T8, TP2  
**Symbol(s):** [DOT]: (R5) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 5000 pounds (2270 Kilograms).  
**Description:** UN1789, Hydrochloric acid, 8, II

**TDG (Canada)**

**UN-No:** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No Information available  
**Description:** UN1789, Hydrochloric acid, 8, II

**ADR**

**UN Number** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Transport hazard class(es)** 8  
**Packing group** II  
**Subsidiary Risk:** No information available  
**Special Provisions** 520  
**Description:** UN1789, Hydrochloric acid, 8, II, ENVIRONMENTALLY HAZARDOUS

**IMDG**

**UN-No:** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant** No information available  
**EMS:** F-A  
**Description** UN1789, Hydrochloric acid, 8, II, Marine pollutant

**RID**

**UN Number** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Transport hazard class(es)** 8

**Subsidiary Risk:** 8  
**Packing group** II  
**Special Provisions** 520  
**Description:** UN1789, Hydrochloric acid, 8, II, ENVIRONMENTALLY HAZARDOUS

**ICAO (air)**

**UN-No:** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** UN1789, Hydrochloric acid, 8, II  
**Special Provisions** A3

**IATA**

**UN Number** UN1789  
**Proper Shipping Name:** Hydrochloric acid  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** II  
**Precautionary Statements - Response** 8L  
**Special Provisions** No information available  
**Description:** UN1789, Hydrochloric acid, 8, II

**15. REGULATORY INFORMATION**

**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Water	7732-18-5	PresentACTIV E	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Hydrogen chloride	7647-01-0	PresentACTIV E	Present KE-20189	Present	Present (1)-215	Present	Present	Present 231-595-7
Resorcinol	108-46-3	PresentACTIV E	Present KE-02557	Present	Present (5)-5000	Present	Present	Present 203-585-2

**U.S. Regulations**

*Hydrogen chloride*

**Massachusetts RTK:** Present  
**Massachusetts EHS:** extraordinarily hazardous  
**New Jersey RTK Hazardous Substance List:** 1012  
**New Jersey (EHS) List:** 1012 500 lb TPQ  
 2909 500 lb TPQ  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**New Jersey TCPA - EHS:** 15000lbTQ  
 5000lbTQ  
 5600lbTQ  
 2000lbTQ  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Michigan PSM HHC:** = 5000 lb TQ  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 5000 lb RQ  
 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 5000lbfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4  
 2270kgfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4  
 5000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions

based on total mass emitted into or onto all media within any consecutive 24-hour period  
 1000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions  
 based on total mass emitted into the atmosphere

**California Directors List of Hazardous Substances:** Present

**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 182.1057

**FDA - 21 CFR - Total Food Additives** 133.129, 155.191, 155.194, 160.105, 160.185, 172.560, 172.892, 182.1057

**- List Sourced from EAFUS**

*Resorcinol*

**Massachusetts RTK:** Present

**New Jersey RTK Hazardous Substance List:** 1634

**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present

**Pennsylvania RTK:** Environmental hazard

**Pennsylvania RTK - Environmental Hazard List** Present

**Minnesota - Hazardous Substance List:** Present

**New York Release Reporting - List of Hazardous Substances:**

5000 lb RQ

1 lb RQ

**Louisiana Reportable Quantity List for Pollutants:** 5000lbfinal RQ

2270kgfinal RQ

**California Directors List of Hazardous Substances:** Present

**FDA - 21 CFR - Total Food Additives** 177.1210

**- List Sourced from EAFUS**

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Hydrogen chloride	7647-01-0	Not Listed	Not Listed	Not Listed	Not Listed
Resorcinol	108-46-3	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Water	7732-18-5	None	None	None	None	None
Hydrogen chloride	7647-01-0	5000 lb final RQ 2270 kg final RQ	5000 lb EPCRA RQ	None	None	1.0 % de minimis concentration
Resorcinol	108-46-3	5000 lb final RQ 2270 kg final RQ	None	None	None	None

**U.S. TSCA**

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Water	7732-18-5	Not Applicable	Not Applicable
Hydrogen chloride	7647-01-0	Not Applicable	Not Applicable
Resorcinol	108-46-3	Not Applicable	Not Applicable

**Canada**

**WHIMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component  
Water  
7732-18-5 ( 62.37 )  
Hydrogen chloride  
7647-01-0 ( 36.63 )

WHMIS 2015 Hazard Classification  
Not a dangerous product according to HPR classification criteria

Hydrogen Chloride: Gases under pressure - Liquefied gas: H280 Contains gas under pressure, may explode when heated.; Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.  
Hydrochloric Acid: Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Oral - Category 4: H302 Harmful if swallowed. (3.6% in aqueous solution); Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation. (3.6% in aqueous solution); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation. (3.6% in aqueous solution)  
Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Skin sensitizers - Category 1: H317 May cause allergic skin reaction.

Resorcinol  
108-46-3 ( 1 )

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

**DSL/NDSL**

Component	CAS No	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Hydrogen chloride	7647-01-0	Present	Not Listed
Resorcinol	108-46-3	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Hydrogen chloride	7647-01-0	Not listed
Resorcinol	108-46-3	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Hydrogen chloride	7647-01-0	Not listed
Resorcinol	108-46-3	Not listed

**EU Classification**

**EU GHS - SV - CLP 1272/2008**

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Water	7732-18-5	
Hydrogen chloride	7647-01-0	Hydrogen Chloride: Gases under pressure: H280 Contains gas under pressure, may explode when heated.; Acute toxicity - Inhalation - Acute Tox.



		<p>3: H331 Toxic if inhaled. (Minimum classification); Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage.017-002-00-2  Hydrochloric Acid: Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (C &gt;= 25 %); Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C &gt;= 10 %)017-002-01-X  Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (C &gt;= 25 %); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (10 % &lt;= C &lt;25 %); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation. (10 % &lt;= C &lt;25 %); Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C &gt;= 10 %)017-002-01-X</p>
Resorcinol	108-46-3	<p>Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation.; Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation.; Hazardous to aquatic environment - acute hazard - Aquatic Acute 1: H400 Very toxic to aquatic life.604-010-00-1</p>

**EU - CLP (1272/2008)**

**R-phrase(s)**

R34 - Causes burns  
R37 - Irritating to respiratory system  
R20/22 - Harmful by inhalation and if swallowed

**S -phrase(s)**

S 7 - Keep container tightly closed.  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
S38 - In case of insufficient ventilation, wear suitable respiratory equipment  
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)  
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Hydrogen chloride	7647-01-0	<p>Hydrogen Chloride  T; R23  C; R35  Hydrochloric Acid:  + hydrochloric acid  ...%  C; R34 - Xi; R37  Concentration Limit(s):</p>	<p>Hydrogen Chloride:  0.02%&lt;=C&lt;0.2%  Xi;R36/37/38  0.2%&lt;=C&lt;0.5%  C;R34  0.5%&lt;=C&lt;1%  C;R20-34  1%&lt;=C&lt;5% C;R20-35</p>	<p>For Hydrogen Chloride:  S1/2 S9 S26  S36/37/39 S45  Hydrochloric Acid:  S(1/2)-S26-S45</p>

		C >= 25 % C; R34-37 10 % <= C < 25 % Xi; R36/37/38	5%<=C T;C;R23-35	
Resorcinol	108-46-3	Xn; R22 Xi; R36/38 N; R50	10%<=C Xn; R22	S: 2-26-61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

C - Corrosive

Xn - Harmful



## 16. OTHER INFORMATION

Preparation Date: 07/23/2015  
Revision date 11/11/2019  
Prepared by: Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**