

## SAFETY DATA SHEET

Preparation Date: 4/27/2016

Revision Date: 7/27/2016

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** T-181  
**Product Name:** TRICHLOROACETIC ACID, 30 PERCENT (W/V) AQUEOUS 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:** Martin LaBenz (West Coast)

**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

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

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

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Corrosive to metals	Category 1

**Label elements**

**Danger**

**Hazard statements**

Causes severe skin burns and eye damage  
 Suspected of causing cancer  
 May be corrosive to metals



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Do not breathe dust/fume/gas/mist/vapors/spray

Wash face, hands and any exposed skin thoroughly after handling

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/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 doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
Water	7732-18-5	70
Trichloroacetic Acid	76-03-9	30

**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)

**Product code:** T-181

**Product name:** TRICHLOROACETIC  
ACID, 30 PERCENT (W/V) AQUEOUS  
SOLUTION

**2 / 12**

involved and take precautions to protect themselves.

**Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Get medical attention immediately. Call a physician or Poison Control Centre immediately.

**Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **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. Obtain medical attention.

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

**Symptoms** Severe skin and eye irritation or burns. Skin contact may result in redness, pain, inflammation, itching, scaling. May cause eye damage. Irritating to respiratory system. Causes digestive (gastrointestinal) tract irritation. May cause gastrointestinal (digestive) tract burns. Can burn mouth, throat, and stomach. May cause metabolic acidosis. Ingestion may cause nausea, vomiting, and diarrhea.

**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 is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** No information available.

**Specific hazards:** No information available.

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

**Environmental precautions** Prevent further leakage or spillage if safe to do so. 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.

**Methods for cleaning up** Neutralize with Sodium carbonate. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste 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. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Do not ingest. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

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

#### **Incompatible Materials:**

Oxidizing agents. Bases. Metals. Zinc. Iron. Aluminum.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Water	7732-18-5	None	None	None	None
Trichloroacetic Acid	76-03-9	None	= 7 mg/m <sup>3</sup> TWA	= 1 ppm TWA	None

##### **Canada**

Components	CAS-No.	Alberta	British Columbia	Ontario	Quebec
Water	7732-18-5	None	None	None	None
Trichloroacetic Acid	76-03-9	= 1 ppm TWA	= 1 ppm TWA	1 ppm TWA	1 ppm TWAEV

**Product code:** T-181

**Product name:** TRICHLOROACETIC  
ACID, 30 PERCENT (W/V) AQUEOUS  
SOLUTION

**4 / 12**

		= 6.7 mg/m <sup>3</sup> TWA			6.7 mg/m <sup>3</sup> TWAEV
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### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Water	7732-18-5	None	None
Trichloroacetic Acid	76-03-9	6.7 mg/m <sup>3</sup> TWA 1 ppm TWA	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

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

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Clear. Colorless.
<b>Odor:</b> No information available.	<b>Taste</b> No information available.	<b>Formula:</b> No information available
<b>Molecular/Formula weight:</b> No information available	<b>Flammability:</b> No information 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/cm<sup>3</sup>):</b> No information available
<b>Specific gravity:</b> Weighted Average: 1.23	<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

**Product code:** T-181

**Product name:** TRICHLOROACETIC ACID, 30 PERCENT (W/V) AQUEOUS SOLUTION

5 / 12

**Miscibility:**  
No information available

**Solubility:**  
Easily soluble in cold water

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents, metals, bases

### Chemical stability

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

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Bases. Metals. Zinc. Iron. Aluminum.

**Hazardous decomposition products:** No information available.

### Other Information

**Corrosivity:** Extremely corrosive in presence of zinc  
Extremely corrosive in presence of aluminum, of copper  
Extremely corrosive in the presence of stainless steel (304)  
Highly corrosive in the presence of stainless steel (304)  
Non-corrosive in presence of glass.

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

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation. Eyes. Skin.

### Acute Toxicity

### Component Information

Water - 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 LC50 information** = No information available

Trichloroacetic Acid - 76-03-9

**LD50/oral/rat** = 3320 mg/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

**Product code:** T-181

**Product name:** TRICHLOROACETIC  
ACID, 30 PERCENT (W/V) AQUEOUS  
SOLUTION

6 / 12

Other LD50 or LC50 information = No information available

**Product Information**

LD50/oral/rat =  
VALUE- Acute Tox Oral = No information available

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

LD50/dermal/rabbit  
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat  
VALUE -Acute Tox Dermal = 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:** Causes severe skin irritation, thickening of the skin, blisters, and burns. It causes mild to moderate burns of the skin.
- Eye Contact:** Causes severe irritation, and burns of the eyes. It causes mild to moderate burns of the eyes.
- Inhalation** Severely irritating to the upper respiratory tract. Symptoms may include coughing, sneezing, choking, difficulty breathing, and pulmonary edema.
- Ingestion** Causes digestive tract irritation, and burns. Systemic effects following ingestion are secondary to gastrointestinal tract damage and acidosis. Ingestion causes drooling, stridor, severe burning pain in the mouth, throat, esophagus, abdomen (stomach), followed by bloody vomiting and diarrhea.
- Aspiration hazard** No information available.

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

**Chronic Toxicity** Skin: Prolonged or repeated skin contact may cause skin irritation and dermatitis. Inhalation: Chronic inhalation may cause erosion of the tooth enamel, jaw necrosis, bronchial irritation, chronic cough, frequent attacks of pneumonia, and gastrointestinal tract disturbances. Ingestion: Chronic ingestion may affect the liver, and metabolism (weight loss), and urinary system. (Trichloroacetic acid).

**Sensitization:** No information available.

**Mutagenic Effects:** Experiments with bacteria and/or yeast have shown mutagenic effects  
May affect genetic material

**Carcinogenic effects:** May cause cancer based on animal test data. Suspected of causing cancer.

Components	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
Trichloroacetic Acid	76-03-9	Group 2 B - Monograph 106 [2014] Monograph 84 [2004] Monograph 63 [1995]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*A3 - Animal Carcinogen*

*IARC (International Agency for Research on Cancer)*

*Group 2B - Possibly Carcinogenic to Humans*

*NTP (National Toxicology Program)*

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

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** liver. lungs.

**STOT - repeated exposure** No information available.

**Target Organs:** Liver. Lungs.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility:** 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

**Product code:** T-181

**Product name:** TRICHLOROACETIC ACID, 30 PERCENT (W/V) AQUEOUS SOLUTION



Components	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
Trichloroacetic Acid	76-03-9	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid, solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**ERG No:** 153  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):**

### TDG (Canada)

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No Information available

### ADR

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Packing Group:** II  
**Subsidiary Risk:** No information available

### IMO / IMDG

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No information available  
**EMS:** F-A

### RID

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II

### ICAO

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II

**Product code:** T-181

**Product name:** TRICHLOROACETIC ACID, 30 PERCENT (W/V) AQUEOUS SOLUTION

**9 / 12**

**IATA**

**UN-No:** UN2564  
**Proper Shipping Name:** Trichloroacetic acid solution  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**ERG Code:** 8L  
**Special Provisions** No information available

**15. REGULATORY INFORMATION****International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Water	7732-18-5	Present	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Trichloroacetic Acid	76-03-9	Present	Present KE-34058	Present	Present (2)-528 (2)-1188	Present	Present	Present 200-927-2

**U.S. Regulations***Trichloroacetic Acid*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 1883  
**Pennsylvania RTK:** Present  
**Minnesota - Hazardous Substance List:** Present  
**California Directors List of Hazardous Substances:** Present

**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)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Trichloroacetic Acid	76-03-9	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	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
Trichloroacetic Acid	76-03-9	None	None	None	None	None

**U.S. TSCA**

Components	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
Trichloroacetic Acid	76-03-9	Not Applicable	Not Applicable

**Canada****Product code:** T-181

**Product name:** TRICHLOROACETIC  
 ACID, 30 PERCENT (W/V) AQUEOUS  
 SOLUTION

**10 / 12**

**WHMIS hazard class:**  
E Corrosive material

**Components**  
Water

**WHIMHAZ**  
Uncontrolled product according to WHMIS classification criteria

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Trichloroacetic Acid	1 %

**Inventory**

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Trichloroacetic Acid	76-03-9	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Trichloroacetic Acid	76-03-9	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Trichloroacetic Acid	76-03-9	Not listed

**EU Classification**

**R-phrase(s)**

R35 - Causes severe burns.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**S -phrase(s)**

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 - This material and its container must be disposed of as hazardous waste.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

S 1/2 - Keep locked up and out of the reach of children.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Trichloroacetic Acid	76-03-9	C; R35 N; R50-53	25%≤C: C,N; R35-50/53 10%≤C<25%: C,N; R35-51/53 5%≤C<10%: C,N; R34-51/53 2.5%≤C<5%: Xi,N; R36/37/38-51/53 1%≤C<2.5%: Xi; R36/37/38-52/53 0.25%≤C<1%: R52/53	S1/2 S26 S36/37/39 S45 S60 S61

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

**Indication of danger:**

C - Corrosive.

N - Dangerous for the environment.

**16. OTHER INFORMATION**

**Preparation Date:** 4/27/2016  
**Revision Date:** 7/27/2016  
**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**