

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** TRICHLOROACETIC ACID

**Other means of identification**

**Product No.:** 2924, 2928, 0414

**Recommended use and restriction on use**

**Recommended use:** Not available.

**Restrictions on use:** Not known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

Company Name: Avantor Performance Materials, Inc.  
Address: 3477 Corporate Parkway, Suite 200  
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:  
Contact Person: Environmental Health & Safety  
e-mail: info@avantormaterials.com

**Emergency telephone number:**

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

## 2. Hazard(s) identification

**Hazard classification**

**Physical hazards**

Corrosive to metals Category 1

**Health hazards**

Acute toxicity (Oral) Category 4

Skin corrosion/irritation Category 1

Serious eye damage/eye irritation Category 1

Germ cell mutagenicity Category 2

Toxic to reproduction Category 2

Specific target organ toxicity - single exposure Category 3

Specific target organ toxicity - repeated exposure (Oral) Category 2

**Environmental hazards**

Acute hazards to the aquatic environment Category 1

Chronic hazards to the aquatic environment Category 1

**Label elements**

**Hazard symbol:**



**Signal word:** Danger

**Hazard statement:** May be corrosive to metals.  
Harmful if swallowed.  
Causes severe skin burns and eye damage.  
Suspected of causing genetic defects.  
Suspected of damaging fertility or the unborn child.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention:** Keep only in original container. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

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

**Storage:** Store locked up. Store in a well-ventilated place. Keep container tightly closed.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

### 3. Composition/information on ingredients

**Substances**

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
TRICHLOROACETIC ACID		76-03-9	99 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

### 4. First-aid measures

<b>General information:</b>	Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
<b>Ingestion:</b>	Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Inhalation:</b>	Move to fresh air. If breathing is difficult, give oxygen. Apply artificial respiration if victim is not breathing Call a physician or poison control center immediately.
<b>Skin contact:</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air.

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

<b>Symptoms:</b>	Causes severe skin and eye burns. Harmful if swallowed. Causes digestive tract burns. Respiratory tract irritation.
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**Indication of immediate medical attention and special treatment needed**

<b>Treatment:</b>	Treat symptomatically. Symptoms may be delayed.
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**5. Fire-fighting measures**

<b>General fire hazards:</b>	In case of fire and/or explosion do not breathe fumes.
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**Suitable (and unsuitable) extinguishing media**

<b>Suitable extinguishing media:</b>	Foam. Dry chemicals. Carbon dioxide Water spray.
<b>Unsuitable extinguishing media:</b>	None known.

<b>Specific hazards arising from the chemical:</b>	During fire, gases hazardous to health may be formed. Wear appropriate protective gear if spilled during fire fighting. Product is acidic.
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**Special protective equipment and precautions for firefighters**

<b>Special fire fighting procedures:</b>	Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.
<b>Special protective equipment for fire-fighters:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**

Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

**Methods and material for containment and cleaning up:**

Sweep up and place in a clearly labeled container for chemical waste. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures:**

Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

**Environmental precautions:**

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling:**

Wear protective gloves/protective clothing/eye protection/face protection. Do not get in eyes, on skin, on clothing. Do not taste or swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands thoroughly after handling. Use caution when adding this material to water. See Section 8 of the MSDS for Personal Protective Equipment.

**Conditions for safe storage, including any incompatibilities:**

Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Store in a cool and well-ventilated place. Store in corrosive resistant container with a resistant inner liner. Do not store in metal containers.

## 8. Exposure controls/personal protection

**Control parameters**
**Occupational exposure limits**

Chemical identity	Type	Exposure Limit values	Source
TRICHLOROACETIC ACID	TWA	1 ppm	US. ACGIH Threshold Limit Values (2011)
	TWA	0.5 ppm	US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values (02 2012)
	REL	1 ppm 7 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	1 ppm 7 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate engineering controls**

No data available.

**Individual protection measures, such as personal protective equipment**
**General information:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:**

Wear safety glasses with side shields (or goggles) and a face shield. Use tight fitting goggles if dust is generated.

**Skin protection**

<b>Hand protection:</b>	Chemical resistant gloves
<b>Other:</b>	Wear suitable protective clothing.
<b>Respiratory protection:</b>	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.
<b>Hygiene measures:</b>	Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Do not get this material in contact with skin. Do not get in eyes.

## 9. Physical and chemical properties

### Appearance

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystalline solid
<b>Color:</b>	Colorless to white
<b>Odor:</b>	Pungent
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	1.2 (0.1 molar aqueous solution)
<b>Melting point/freezing point:</b>	57.5 °C
<b>Initial boiling point and boiling range:</b>	195 °C
<b>Flash Point:</b>	No data available.
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	Noncombustible Solid
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	No data available.
<b>Flammability limit - lower (%):</b>	No data available.
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	0.02 kPa (25 °C)
<b>Vapor density:</b>	No data available.
<b>Relative density:</b>	1.6 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	Miscible with water.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

### Other information

<b>Molecular weight:</b>	163.4 g/mol (C <sub>2</sub> HCl <sub>3</sub> O <sub>2</sub> )
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## 10. Stability and reactivity

<b>Reactivity:</b>	Reacts with water.
<b>Chemical stability:</b>	Material is stable under normal conditions.

<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Contact with incompatible materials. Do not allow water to get into container because of reaction.
<b>Incompatible materials:</b>	Strong oxidizing agents. Bases, alkalies (organic). Moisture.
<b>Hazardous decomposition products:</b>	Thermal decomposition may release oxides of carbon. Hydrogen Chloride.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion:</b>	May cause burns of the gastrointestinal tract if swallowed.
<b>Inhalation:</b>	Irritating to respiratory tract.
<b>Skin contact:</b>	Causes severe skin burns.
<b>Eye contact:</b>	Causes serious eye damage.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

##### Oral

<b>Product:</b>	LD 50 (Rat): 400 mg/kg LD 50 (Mouse): 4.97 g/kg
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##### Dermal

<b>Product:</b>	LD 50 (Rat): > 2,000 mg/kg
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##### Inhalation

<b>Product:</b>	No data available.
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##### Repeated dose toxicity

<b>Product:</b>	No data available.
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##### Skin corrosion/irritation

<b>Product:</b>	Causes severe skin burns.
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##### Serious eye damage/eye irritation

<b>Product:</b>	Causes serious eye damage.
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##### Respiratory or skin sensitization

<b>Product:</b>	Not a skin sensitizer.
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##### Carcinogenicity

<b>Product:</b>	This substance has no evidence of carcinogenic properties.
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#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

#### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

## Germ cell mutagenicity

### In vitro

**Product:** No mutagenic components identified

### In vivo

**Product:** No mutagenic components identified

## Reproductive toxicity

**Product:** No components toxic to reproduction

## Specific target organ toxicity - single exposure

**Product:** No data available.

## Specific target organ toxicity - repeated exposure

**Product:** No data available.

## Aspiration hazard

**Product:** Not classified

**Other effects:** None known.

## 12. Ecological information

### Ecotoxicity:

#### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Specified substance(s):

TRICHLOROACETIC ACID LC 50 (Fathead minnow (*Pimephales promelas*), 96 h): 2,000 mg/l Mortality  
LC 50 (Carp (*Cyprinus carpio*), 96 h): 2,500 mg/l Mortality

##### Aquatic invertebrates

**Product:** No data available.

##### Specified substance(s):

TRICHLOROACETIC ACID EC 50 (Water flea (*Daphnia magna*), 48 h): 146 mg/l Intoxication  
LC 50 (Water flea (*Daphnia magna*), 96 h): 3,100 mg/l Mortality

#### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

### Persistence and degradability

#### Biodegradation

**Product:** There are no data on the degradability of this product.

#### BOD/COD ratio

**Product:** No data available.

### Bioaccumulative potential

#### Bioconcentration factor (BCF)

**Product:** No data available on bioaccumulation.

**Partition coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** Very toxic to aquatic life with long lasting effects.

### 13. Disposal considerations

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Contaminated packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

UN number:	UN 1839
UN proper shipping name:	Trichloroacetic acid
Transport hazard class(es)	
Class(es):	8
Label(s):	8
Packing group:	II
Marine Pollutant:	No

#### IMDG

UN number:	UN 1839
UN proper shipping name:	TRICHLOROACETIC ACID, SOLID
Transport hazard class(es)	
Class(es):	8
Label(s):	8
EmS No.:	F-A, S-B
Packing group:	II
Marine Pollutant:	No

#### IATA

UN number:	UN 1839
Proper Shipping Name:	Trichloroacetic acid
Transport hazard class(es):	
Class(es):	8
Label(s):	8
Marine Pollutant:	No
Packing group:	II

### 15. Regulatory information

#### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

None present or none present in regulated quantities.

**Superfund amendments and reauthorization act of 1986 (SARA)**
**Hazard categories**
☒ Acute (Immediate)    ☒ Chronic (Delayed)    ☐ Fire    ☐ Reactive    ☐ Pressure Generating

**SARA 302 Extremely hazardous substance**

None present or none present in regulated quantities.

**SARA 304 Emergency release notification**

None present or none present in regulated quantities.

**SARA 311/312 Hazardous chemical**

Chemical identity	Threshold Planning Quantity
TRICHLOROACETIC ACID	500 lbs

**SARA 313 (TRI reporting)**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**US state regulations**
**US. California Proposition 65**

TRICHLOROACETIC  
ACID      Carcinogenic. WARNING: This product  
contains a chemical known to the State of  
California to cause cancer.

**US. New Jersey Worker and Community Right-to-Know Act**

TRICHLOROACETIC ACID      Listed

**US. Massachusetts RTK - Substance List**

TRICHLOROACETIC      Listed  
ACID

**US. Pennsylvania RTK - Hazardous Substances**

TRICHLOROACETIC ACID      Listed

**US. Rhode Island RTK**

TRICHLOROACETIC ACID      Listed

### Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

### 16. Other information, including date of preparation or last revision

### NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

<b>Issue date:</b>	08-01-2014
<b>Revision date:</b>	No data available.
<b>Version #:</b>	1.0
<b>Further information:</b>	No data available.

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