

**SECTION 1 - CHEMICAL IDENTIFICATION**

PRODUCT NAME: TCEP Hydrochloride [TRIS (2-Carboxyethyl) Phosphine HCl]  
 CATALOG #: DST26500  
 SUPPLIER'S NAME: DOT SCIENTIFIC INC.  
 SUPPLIERS ADDRESS: 4165 Lippincott, Burton, MI 48519  
 EMERGENCY CONTACT: 1-800-424-9300 (Reference Customer Number: 18739)  
 OTHER INFORMATION: 1-800-878-1785  
 OTHER INFORMATION: 800-878-1785

**SECTION 2 - HAZARDS IDENTIFICATION**
**2.1 Classification of the substance or mixture**
**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

H314	Skin corrosion	Category 1B
------	----------------	-------------

**2.2 GHS Label elements, including Hazard and Precautionary Statement(s)**
**Pictogram**

**Signal word: Danger**
**Hazard statement(s)**

H314	Causes severe skin burns and eye damage.
------	--

**Prevention, Response, Storage and Disposal Precautionary Statement(s)**

P260	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+ P330+ P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+ P61+ P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+ P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see. on this label).
P363	Wash contaminated clothing before reuse
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

CAS Number: 51805-45-9  
 Molecular Weight: 286.65 g/mol  
 Formula: C<sub>9</sub>H<sub>15</sub>O<sub>6</sub>P • HCl

## **SECTION 4 - FIRST-AID MEASURES**

### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## **SECTION 5 - FIRE FIGHTING MEASURES**

### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use Dry powder, water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NOx), Hydrogen Chloride gas.

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**5.4 Further information:** No data available

## **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

## **SECTION 7 - HANDLING AND STORAGE**

**7.1 Precautions for safe handling:** Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Hygroscopic: Keep in a dry place. Store at 2-8°C.

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

## **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

**Components with workplace control parameters:** Contains no substances with occupational exposure limit values.

### **8.2 Exposure Controls**

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### 8.3 Personal protective equipment

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	White Solid	<b>Vapor Pressure</b>	No Data Available
<b>Odor</b>	No Data Available	<b>Vapor Density</b>	No Data Available
<b>Odor Threshold</b>	No Data Available	<b>Relative Density</b>	No Data Available
<b>pH</b>	No Data Available	<b>Water Solubility</b>	No Data Available
<b>Melting / Freezing Point</b>	No Data Available	<b>Partition Coefficient</b>	No Data Available
<b>Initial Boiling Point Range</b>	No Data Available	<b>Auto-Ignition Temperature</b>	No Data Available
<b>Flash Point</b>	No Data Available	<b>Decomposition Temperature</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability Or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

## SECTION 10 - STABILITY AND REACTIVITY

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

**Hazardous Decomposition Products:** Carbon oxides. Nitrogen oxides (NOx). Hydrogen chloride gas.

**Hazardous Polymerization:** No Data Available.

**Incompatibilities:** Strong Oxidizing Agent.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Acute Toxicity

<b>LD50 Oral</b>	<b>LD50Dermal</b>	<b>LD50 Intraperitoneal</b>
3,500 mg/kg ( Rat )	> 3,000 mg/kg (Rat)	No data available

## SECTION 12 - ECOLOGICAL INFORMATION

**Ecotoxicity:** No data available

**Persistence and degradability/ Bioaccumulative potential:** No data available

**Mobility in soil/ Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

## SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local

4168 Lippincott · Burton, Michigan 48519

Phone: (810) 744-1475 · Toll Free: (800) 878-1785 · Fax: (810) 744-2865

E-Mail: sales@dotscientific.com · Website: www.dotscientific.com

disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

#### **SECTION 14 - TRANSPORT INFORMATION**

	UN#	Proper Shipping Name	Hazard Class	Packaging Group
DOT	3261	Corrosive solid, acidic, organic, N.O.S. (Tris(2-carboxyethyl)phosphine hydrochloride)	8	II
TDG	3261	Corrosive solid, acidic, organic, N.O.S. (Tris(2-carboxyethyl)phosphine hydrochloride)	8	II
IATA	3261	Corrosive solid, acidic, organic, N.O.S. (Tris(2-carboxyethyl)phosphine hydrochloride)	8	II
IMDG/IMO	3261	Corrosive solid, acidic, organic, N.O.S. (Tris(2-carboxyethyl)phosphine hydrochloride)	8	II

#### **SECTION 15 - REGULATORY INFORMATION**

##### **USA FEDERAL REGULATION**

##### **SARA 311/312 HAZARDOUS CATEGORIZATION**

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release Of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

**TSCA 12(b):** Not Applicable

**SARA 313:** Not Applicable

**Clean Water Act/ Clean Air Act:** Not Applicable

**OSHA/ CERCLA:** Not Applicable

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

##### **HMIS Rating**

Health Hazard	Flammability	Physical Hazard
3	0	0

##### **NFPA Rating**

Health Hazard	Flammability	Reactivity Hazard
3	0	0

##### **STATE RIGHT TO KNOW**

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
-	Listed	Listed	-	-

##### **US DEPARTMENT OF TRANSPORTATION**

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
No	No	No

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**This SDS complies with the requirements of Regulation (EC).**

#### **SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. DOT SCIENTIFIC INC. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only. REV October 2015