

# TRIS(2-CHLOROETHYL) PHOSPHATE

1677  
April 2007

CAS No: 115-96-8

RTECS No: KK2450000

UN No: 3082

EC No: 204-118-5

Tri(beta-chloroethyl) phosphate

Tris(2-chloroethyl) orthophosphate

Ethanol, 2-chloro-, phosphate (3:1)

TCEP

$C_6H_{12}Cl_3O_4P / (ClCH_2CH_2O)_3PO$

Molecular mass: 285.5

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Powder, water spray, foam, carbon dioxide.
<b>EXPLOSION</b>	Vapour/air mixtures are explosive.		
<b>EXPOSURE</b>	See EFFECTS OF LONG-TERM OR REPEATED EXPOSURE.	AVOID ALL CONTACT!	
<b>Inhalation</b>		Ventilation, local exhaust, or breathing protection.	Fresh air, rest.
<b>Skin</b>		Protective gloves. Protective clothing.	Rinse and then wash skin with water and soap.
<b>Eyes</b>		Safety spectacles	Rinse with plenty of water (remove contact lenses if easily possible).
<b>Ingestion</b>		Do not eat, drink, or smoke during work.	Rinse mouth. Refer for medical attention.

## SPILLAGE DISPOSAL

Personal protection: filter respirator for organic gases and vapours. Do NOT let this chemical enter the environment. Collect leaking liquid in covered containers. Absorb remaining liquid in sand or inert absorbent and remove to safe place.

## PACKAGING & LABELLING

### EU classification

Xn Symbol

N Symbol

R: 22-40-51/53

S: (2-)36/37-61

### UN classification

UN Hazard Class: 9

UN Pack Group: III

### GHS classification

Signal: Warning

Excl mark-Health haz

Harmful if swallowed

Suspected of causing cancer

Suspected of damaging fertility or the unborn child

Toxic to aquatic life

## EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-90GM6-III

## SAFE STORAGE

Keep in a well-ventilated room. Store in an area without drain or sewer access. Separated from food and feedstuffs. Provision to contain effluent from fire extinguishing.

**IPCS**

International  
Programme on  
Chemical Safety



Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission ©  
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SEE IMPORTANT INFORMATION ON THE BACK.

**IMPORTANT DATA****Physical State; Appearance**

COLOURLESS TO YELLOW LIQUID

**Chemical dangers**

The substance decomposes on heating at temperatures above 320! C producing hydrogen chloride and phosphorus oxides. Reacts with strong bases and strong oxidants.

**Occupational exposure limits**

TLV not established.  
MAK not established.

**Routes of exposure**

The substance can be absorbed into the body in hazardous amounts by ingestion.

**Inhalation risk**

A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20/C.

**Effects of long-term or repeated exposure**

This substance is possibly carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

**PHYSICAL PROPERTIES**

Decomposes

Melting point: -51 /C

Relative density (water = 1): 1.4

Solubility in water, g/100 ml at 20/C: 0.78 (very poor)

Vapour pressure, Pa at /C: negligible

Relative vapour density (air = 1): 9.8

Flash point: 202/C c.c.

Auto-ignition temperature: 480/C

Octanol/water partition coefficient as log Pow: 1.78

**ENVIRONMENTAL DATA**

The substance is toxic to aquatic organisms. It is strongly advised that this substance does not enter the environment.

**NOTES**

Do NOT take working clothes home.

Depending on the degree of exposure, periodic medical examination is suggested.

TCEP is an abbreviation which also refers to trichloroethanol-1-phosphate, commonly known as Triclofos, which is a different substance.

**ADDITIONAL INFORMATION****LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information