

Revision Date 11-Nov-2010

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

### Product Identifier

**Product Description:** Tetracyanoethylene  
**Cat No.** 138050000; 138050100; 138050250  
**Synonyms** TCNE

### Relevant identified uses of the substance or mixture and uses advised against

**Recommended Use** Laboratory chemicals  
**Uses advised against** No Information available

### Details of the supplier of the safety data sheet

#### Company

Acros Organics BVBA  
 Janssen Pharmaceuticaal 3a  
 2440 Geel, Belgium

**E-mail address** begel.sdsdesk@thermofisher.com

#### Emergency Telephone Number

For information in the US, call: 800-ACROS-01  
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

CHEMTREC Phone Number, Europe: 703-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification of the substance or mixture

#### REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 2
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3

### Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R phrases mentioned in this Section, see Section 16

**Symbol(s)** T+ - Very toxic  
**R -phrase(s)** R28 - Very toxic if swallowed  
**Risk Combination Phrases** R23/24 - Toxic by inhalation and in contact with skin

### Label Elements

Tetracyanoethylene

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## 2. HAZARDS IDENTIFICATION


**Signal Word**
**Danger**
**Hazard Statements**

H311 - Toxic in contact with skin  
H300 - Fatal if swallowed  
H331 - Toxic if inhaled

**Precautionary Statements - EU (§28, 1272/2008)**

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P312 - Call a POISON CENTER or doctor/physician if you feel unwell  
P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Other Hazards**

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC No.	Weight %	CAS-No	Classification	GHSCLAS	REACH Reg. No.
Tetracyanomethylene 670-54-2	EEC No. 211- 578-0	98	670-54-2	T; R23/24 T+; R28	Acute Tox. 2 (H300) Acute Tox. 3 (H311) Acute Tox. 3 (H331)	-

For the full text of the R phrases mentioned in this Section, see Section 16

## 4. FIRST AID MEASURES

**Description of first aid measures**
**Eye Contact**

Immediate medical attention is required Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes

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<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes Immediate medical attention is required
<b>Ingestion</b>	Call a physician immediately Clean mouth with water
<b>Inhalation</b>	Remove from exposure, lie down Move to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration Immediate medical attention is required
<b>Notes to Physician</b>	Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Water spray Carbon dioxide (CO<sub>2</sub>) Dry chemical chemical foam

#### **Extinguishing media which must not be used for safety reasons**

No information available.

### Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

### Advice for fire-fighters

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

Ensure adequate ventilation

### Environmental precautions

Prevent further leakage or spillage if safe to do so

### Methods and material for containment and cleaning up

Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Do not breathe dust Do not breathe vapors or spray mist Do not get in eyes, on skin, or on clothing Use only in area provided with appropriate exhaust ventilation

### Conditions for safe storage, including any incompatibilities

Keep in a dry place Keep container tightly closed Keep locked-up Keep refrigerated

### Specific End Uses

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Derived No Effect Level (DNEL)

No information available.

#### Predicted No Effect Concentration (PNEC)

No information available.

### Exposure controls

#### Engineering Measures

Ensure adequate ventilation, especially in confined areas

#### Personal protective equipment

##### Eye Protection

Goggles

##### Hand Protection

Protective gloves

##### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

##### 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 EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical State

Powder, Solid

### Appearance

Beige

### odor

odorless

### pH

No information available.

### Boiling Point/Range

223°C / 433.4°F @ 760 mmHg

### Melting Point/Range

196 - 201°C / 384.8 - 393.8°F

### Flash Point

No information available.

### Water Solubility

hydrolyzes (forming HCN) in water

### Molecular Formula

C<sub>6</sub> N<sub>4</sub>

### Molecular Weight

128.09

## 10. STABILITY AND REACTIVITY

### Reactivity

### Chemical Stability

Moisture sensitive.

### Possibility of Hazardous Reactions

#### Hazardous Polymerization

No information available.

#### Hazardous Reactions .

No information available.

### Conditions to Avoid

Incompatible products, Exposure to moist air or water.

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**Incompatible Materials**

Strong oxidizing agents, Strong acids, Strong bases, Strong reducing agents.

**Hazardous Decomposition Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Hydrogen cyanide (hydrocyanic acid).

## 11. TOXICOLOGICAL INFORMATION

**Information on Toxicological Effects**

**Acute Toxicity**

**Product Information**

Product does not present an acute toxicity hazard based on known or supplied information

**Component Information**

**Component**

Tetracyanomethylene

LD50 Oral	LD50 Dermal	LC50 Inhalation
5 mg/kg ( Rat )		

**Chronic Toxicity**

**Carcinogenicity**

There are no known carcinogenic chemicals in this product

**Sensitization**

No information available.

**Mutagenic Effects**

No information available

**Reproductive Effects**

No information available.

**Developmental Effects**

No information available.

**Target Organs**

No information available.

**Other Adverse Effects**

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

**Endocrine Disruptor Information**

None known

## 12. ECOLOGICAL INFORMATION

**Toxicity**

**Ecotoxicity effects**

Do not empty into drains

**Persistence and degradability**

No information available

**Bioaccumulative potential**

No information available.

**Mobility in soil**

No information available.

**Results of PBT and vPvB assessment**

**Other adverse effects**

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## 12. ECOLOGICAL INFORMATION

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

Waste from Residues / Unused Products

Dispose of in accordance with local regulations

Contaminated Packaging

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

## 14. TRANSPORT INFORMATION

### IMDG/IMO

UN-No 3439  
Hazard Class 6.1  
Packing Group I

### ADR

UN-No 3439  
Hazard Class 6.1  
Packing Group I

### IATA

UN-No 3439  
Hazard Class 6.1  
Packing Group I

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	CHINA	AICS	KECL
Tetracyanomethylene	211-578-0	-		X	X	-	X	-	-	X	-

### Legend

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory Lists

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**CHINA** - China Inventory of Existing Chemical Substances

**Tetracyanoethylene****Revision Date** 11-Nov-2010**AICS** - Inventory of Chemical Substances**KECL** - Existing and Evaluated Chemical Substances**Chemical Safety Assessment****16. OTHER INFORMATION****Text of R phrases mentioned in Section 2-3**

R28 - Very toxic if swallowed

R23/24 - Toxic by inhalation and in contact with skin

**Revision Date** 11-Nov-2010**Revision Summary** Not applicable**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006****Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

**End of Safety Data Sheet**