

## **MATERIAL SAFETY DATA SHEET**

### **2,3,5-Triphenyltetrazolium Chloride**

#### **1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Product Name: TTC Date: 5<sup>th</sup> July 2018 Version: Discofinechem5

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#### **2. HAZARDS IDENTIFICATION**

##### **2.1 Classification of the substance or mixture**

##### **Classification according to Regulation (EC) No 1272/2008**

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

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

Xi Irritant R36/37/38

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

##### **2.2 Label elements**

##### **Labelling according Regulation (EC) No 1272/2008**

##### **Pictogram**



**Signal word:** Warning

##### **Hazard statement(s)**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

##### **Precautionary statement(s)**

P261 Avoid breathing dust

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

##### **Hazard symbol(s)**



**Xi Irritant**

##### **R-phrases(s)**

R36/37/38 Irritating to eyes, respiratory system and skin.

##### **S-phrases(s)**

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

S36 Wear suitable protective clothing.

##### **2.3 Other hazards** - none

#### **SECTION 3: Composition/information on ingredients**

##### **3.1 Substances**

Synonyms: TTZ, Tetrazolium Red, TPTZ

Formula: C<sub>19</sub>H<sub>15</sub>CIN<sub>4</sub> Molecular Weight: 334.8 g/mol

## **Hazardous ingredients according to Regulation (EC) No 1272/2008**

CAS-No. 298-96-4 E.C.No. 206-071-6 Index-No. -

Classification - Skin Irrit. 2; Eye Irrit. 2; STOT; SE 3; H315, H319, H335 Concentration: <= 100 %

## **Hazardous ingredients according to Directive 1999/45/EC**

Component: **2,3,5-Triphenyltetrazolium chloride**

Cas No: 298-96-4 E.C.No: 206-071-6 Classification: Xi, R36/37/38 Concentration: <= 100 %

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

## **4. FIRST AID MEASURES**

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

**General advice** - Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled** - If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** - Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact** - Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed** - The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed** - no data available

## **5. FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

**Suitable extinguishing media** - Use 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 Advice for firefighters** - Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information** - no data available

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

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

**6.3 Methods and materials for containment and cleaning up** - Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections** - For disposal see section 13.

## **SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** - Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Protect against light. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

**7.3 Specific end use(s)** - no data available

## **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**

**Appropriate engineering controls** - Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### **Personal protective equipment**

**Eye/face protection** - Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection** - Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill®

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril®

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,

test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection** - Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection** - For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure** - Do not let product enter drains

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- a) Appearance - Form: solid, Colour: light yellow
- b) Odour - no data available
- c) Odour Threshold - no data available
- d) pH - no data available
- e) Melting point/freezing point - 250 °C
- f) Initial boiling point and boiling range - no data available
- g) Flash point - no data available
- h) Evaporation rate - no data available
- i) Flammability (solid, gas) - no data available
- j) Upper/lower flammability or explosive limits - no data available
- k) Vapour pressure - no data available
- l) Vapour density - no data available
- m) Relative density - no data available
- n) Water solubility - no data available
- o) Partition coefficient: n-octanol/water - no data available
- p) Auto-ignition temperature - no data available
- q) Decomposition temperature - no data available
- r) Viscosity - no data available
- s) Explosive properties - no data available
- t) Oxidizing properties - no data available

**9.2 Other safety information** - no data available

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity** - no data available

**10.2 Chemical stability** - May discolor on exposure to light.

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** - no data available

**10.4 Conditions to avoid** - Exposure to light. Exposure to moisture.

**10.5 Incompatible materials** - Strong oxidizing agents

**10.6 Hazardous decomposition products** - Other decomposition products - no data available

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Acute toxicity** - LD50 Intravenous - mouse - 5.6 mg/kg

**Skin corrosion/irritation** - no data available

**Serious eye damage/eye irritation** - no data available

**Respiratory or skin sensitisation** - no data available

**Germ cell mutagenicity** - no data available

**Carcinogenicity** - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity** - no data available

**Specific target organ toxicity - single exposure** - Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** - no data available

**Aspiration hazard** - no data available

### Additional Information

RTECS: XF8100000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## **SECTION 12: Ecological information**

**12.1 Toxicity** - no data available

**12.2 Persistence and degradability** - no data available

**12.3 Bio-accumulative potential** - no data available

**12.4 Mobility in soil** - no data available

**12.5 Results of PBT and vPvB assessment** - PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects** - no data available

## **SECTION 13: Disposal considerations**

### **13.1 Waste treatment methods**

**Product** - Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging** - Dispose of as unused product.

## **SECTION 14: Transport information**

### **14.1 UN number**

ADR/RID: - IMDG: - IATA: -

### **14.2 UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

### **14.3 Transport hazard class(es)**

ADR/RID: - IMDG: - IATA: -

### **14.4 Packaging group**

ADR/RID: - IMDG: - IATA: -

### **14.5 Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

**14.6 Special precautions for user** - no data available

## **SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**  
no data available

### **15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

## **SECTION 16: Other information**

### **Full text of H-Statements referred to under sections 2 and 3.**

Eye Irrit. Eye irritation

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Skin Irrit. Skin irritation

STOT SE Specific target organ toxicity - single exposure

### **Full text of R-phrases referred to under sections 2 and 3**

Xi Irritant

R36/37/38 Irritating to eyes, respiratory system and skin.

### **Further information**

#### **Warranty**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product.