

## Material Safety Data Sheet

### Section 1: Chemical and Product Identification

#### 1.1 Product Identifiers

Product No.: 1192  
Product Name: TCO-PNB Ester  
Synonym: TCO p-Nitrobenzyl Ester

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

Identified Uses: Laboratory chemicals, Manufacture of substances

### Section 2: Composition/Information on Ingredients

CAS No.: 1438415-89-4  
Mol. Formula: C<sub>15</sub>H<sub>17</sub>NO<sub>5</sub>  
Mol. Weight: 291.30  
Assay: N/A

The product contains no substances which at their given concentration, are considered to be hazardous to health.

### Section 3: Hazards Identification

#### 3.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

#### 3.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

#### 3.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Not a hazardous substance or mixture.

### Section 4: First-Aid Measures

#### 4.1 Description of first aid measures

##### If inhaled

Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

**In case of skin contact**

Rinse with plenty of water. Immediate medical attention is not required.

**In case of eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

**If swallowed**

Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

**4.2 Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**4.3 Most important symptoms and effects, both acute and delayed**

Not Applicable

**4.4 Indication of any immediate medical attention and special treatment needed**

None

**Section 5: Fire Fighting Measures****5.1 Extinguishing media**

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

**5.2 Advice from firefighters**

Standard procedure for chemical fires.

**5.3 Further information**

No data available

**Section 6: Accidental Release Measures****6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

**6.2 Environmental precautions**

No special environmental precautions required.

**6.3 Methods and materials for containment and cleaning up**

Take up mechanically, placing in appropriate containers for disposal.

#### **6.4 Reference to other sections**

See Section 8 for additional information.

### **Section 7: Handling and Storage**

#### **7.1 Precautions for safe handling**

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

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

Keep in a dry, cool and well-ventilated place.

#### **7.3 Specific end use(s)**

For research use only.

### **Section 8: Exposure Controls/Personal Protection**

#### **8.1 Control parameters**

##### **Exposure Limits**

Contains no substances with occupational exposure limit values

##### **Engineering measures**

Ensure adequate ventilation, especially in confined areas

#### **8.2 Exposure controls**

##### **Personal Protective Equipment**

###### **Respiratory protection**

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

###### **Hand protection**

Wear suitable gloves Glove material: Compatible chemical-resistant gloves

###### **Eye/Face protection**

Wear tight sealing safety goggles

###### **Skin/Body Protection**

Wear suitable protective clothing

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice

### Control of Environmental exposure

No special environmental precautions required

## Section 9: Physical and Chemical Properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	Form: solid
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	Not Applicable
e) Melting / Freezing points	°C and °F Mixture has not been tested
f) Initial boiling point & boiling range	°C and °F Mixture has not been tested
g) Flash point	°C and °F Mixture has not been tested
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Explosive limits	Mixture has not been tested
k) Vapor pressure	Mixture has not been tested
l) Vapor pressure	Mixture has not been tested
m) Relative density	Mixture has not been tested
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.

## **Section 10: Stability and Reactivity**

### **10.1 Reactivity**

None known

### **10.2 Chemical stability**

Stable under normal conditions

### **10.3 Possibility of hazardous reactions**

Hazardous reaction has not been reported

### **10.4 Conditions to avoid**

No information available

### **10.5 Incompatible materials**

No dangerous reaction known under conditions of normal use

### **10.6 Hazardous decomposition products**

No data available

## **Section 11: Toxicological Information**

### **11.1 Information on toxicological effects**

**There is no evidence available indicating acute toxicity**

### **11.2 Principal Routes of Exposure**

<b>Irritation</b>	Conclusive but not sufficient for classification
<b>Corrosivity</b>	Conclusive but not sufficient for classification
<b>Sensitization</b>	Conclusive but not sufficient for classification
<b>STOT - Single Exposure</b>	Conclusive but not sufficient for classification
<b>STOT - Repeated Exposure</b>	Conclusive but not sufficient for classification
<b>Carcinogenicity</b>	Conclusive but not sufficient for classification

<b>Mutagenicity</b>	Conclusive but not sufficient for classification
<b>Reproductive toxicity</b>	Conclusive but not sufficient for classification
<b>Aspiration hazard</b>	Conclusive but not sufficient for classification

## **Section 12: Ecological Information**

### **12.1 Toxicity**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

### **12.2 Persistence and degradability**

No information available

### **12.3 Bio accumulative potential**

No information available

### **12.4 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

### **12.5 Other adverse effects**

No information available

## **Section 13: Disposal Considerations**

### **13.1 Waste treatment methods**

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

## **Section 14: Transport Information**

### **14.1 IATA / ADR / DOT-US / IMDG**

Not regulated in the meaning of transport regulations.

<b>UN number</b>	Not Applicable
<b>UN proper shipping name</b>	Not Applicable
<b>Transport hazard class(es)</b>	Not Applicable

<b>Packing group</b>	Not Applicable
<b>Environmental hazards</b>	Not Applicable
<b>Special precautions for user</b>	Not Applicable
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not Applicable

## **Section 15: Regulatory Information**

### **15.1 SARA 313 Components**

This product is not regulated by SARA

### **15.2 Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain HAPs

### **15.3 California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **15.4 WHMIS Hazard Class**

Non-controlled

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

## **Section 16: Other Information**

### **References**

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>

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