

# SAFETY DATA SHEET

[Required under safety and health regulations for shipping and handling]

Version: 2022  
Date Updated: December 31, 2022

## SECTION 1. ----- PRODUCT AND COMPANY IDENTIFICATION -----

**Product Name** Tris  
**Product Code(s)** TB0194/TB0195/TB0196/TB0197  
**Recommended Use** For Laboratory Research Use Only  
 Not for Human or Animal Drug Use

**Supplier** Bio Basic Asia Pacific Pte Ltd.  
**Address** 2 International Business Park Road  
 Strategy #01-04, Singapore 609930

**Telephone** (+65) 6954 2519  
 (+65) 6491 5938

**Email** sg@biobasic-asia.com

## SECTION 2. ----- HAZARDS IDENTIFICATION -----

### Emergency Overview

**WHMIS Classification**  
 Not WHMIS controlled.  
 Not a dangerous substance according to GHS.

### HMIS Classification

**Health hazard:** 0  
**Flammability:** 0  
**Physical hazards:** 0

### Potential Health Effects

**Inhalation** May be harmful if inhaled. May cause respiratory tract irritation.  
**Skin** May be harmful if absorbed through skin. May cause skin irritation.  
**Eyes** May cause eye irritation.  
**Ingestion** May be harmful if swallowed.

## SECTION 3. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

Chemical Name	EC No.	CAS-No.	Weight %
Tris (hydroxymethyl) aminomethane	201-064-4	77-86-1	95-100

## SECTION 4. ----- FIRST-AID MEASURES -----

### Description of first-aid measures

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

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

### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in

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section 11

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

No data available

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

### **Conditions of flammability**

Not flammable or combustible

### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### **Special hazards arising from the substance or mixture**

Carbon oxides

### **Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **Further information**

No data available

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

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

Avoid dust formation. Avoid breathing vapours, mist or gas. For personal protection see section 8.

### **Environmental precautions**

Do not let product enter drains.

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

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### **Reference to other sections**

For disposal see section 13.

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

### **Precautions for safe handling**

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

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

Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Store under inert gas.

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

Apart from the uses mentioned in section 1 no other specific uses are stipulated

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

### **Personal protective equipment**

#### **Eye/face protection**

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.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatrill® (KCL 740 / Aldrich Z677272, Size M)

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Splash contact  
Material: Nitrile rubber  
Minimum layer thickness: 0.11 mm  
Break through time: 480 min  
Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

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 EC 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

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Hygiene measures

General industrial hygiene practice.

### Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

## SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

### Information on basic physical and chemical properties

Appearance	Form: Crystalline Colour: Colourless White
Odour	No data available
Odour Threshold	No data available
pH	10.5 - 12
Melting point/freezing point	Melting point/range: 169 °C (336 °F)
Initial boiling point and boiling range	288 °C (550 °F) at 1,013 hPa (760 mmHg) - Decomposes below the boiling point
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	678 g/l at 20 °C (68 °F)

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Partition coefficient: n-octanol/water	log Pow: -2.31 at 20 °C (68 °F)
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

## SECTION 10. -----STABILITY AND REACTIVITY -----

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Hygroscopic

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides

Other decomposition products - No data available.

In the event of fire: see section 5

## SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

### Acute toxicity

LD50 Oral - rat - > 3,000 mg/kg

Inhalation: No data available

Dermal: LD50 Dermal - rat - > 5,000 mg/kg

### Skin corrosion/irritation

Skin - rabbit - No skin irritation - OECD Test Guideline 404

### Serious eye damage/eye irritation

Eyes - rabbit - No eye irritation - OECD Test Guideline 405

### Respiratory or skin sensitization

Buehler Test - guinea pig - OECD Test Guideline 406 - Does not cause skin sensitization.

### Germ cell mutagenicity

Genotoxicity in vitro - Not mutagenic in Ames Test.

Genotoxicity in vitro - in vitro assay - negative

In vitro tests did not show mutagenic effects

Genotoxicity in vivo - In vivo tests did not show any chromosomal changes

### 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

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### Reproductive toxicity

No data available

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**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Potential Health Effects**

**Inhalation**

May be harmful if inhaled. May cause respiratory tract irritation.

**Skin**

May be harmful if absorbed through skin. May cause skin irritation.

**Eyes**

May cause eye irritation.

**Ingestion**

May be harmful if swallowed.

**Additional Information**

Repeated dose toxicity - rat - Oral - No observed adverse effect level - 1,000 mg/kg

RTECS: TY2900000

## SECTION 12. ----- ECOLOGICAL INFORMATION -----

**Toxicity**

Toxicity to daphnia and other aquatic invertebrates      EC50 – Daphnia -> 980mg/l – 48 h

Toxicity to algae      EC50 - Algae - 397 mg/l - 72 h  
NOEC - Algae - 100 mg/l - 72 h

**Persistence and degradability**

Biodegradability      Result: Readily biodegradable  
Method: OECD Test Guideline 301F

**Bioaccumulative potential**

No bioaccumulation is to be expected (log Pow <= 4).

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

Results of PBT This substance is not considered to be persistent, bioaccumulating nor toxic (PBT) assessment.

**Other adverse effects**

No data available

## SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

## SECTION 14. ----- TRANSPORT INFORMATION -----

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

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**IATA**

Not dangerous goods

**SECTION 15. ----- REGULATORY INFORMATION -----**

**WHMIS Classification**

Not WHMIS controlled

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

**SECTION 16. ----- OTHER INFORMATION -----**

Further information: no limited for paper copy, just for internal uses.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

**Disclaimer**

The information provided on this MSDS 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.

**Issuing Date:** 31-Dec-2022

**End of SDS**