

MSDS

Material Safety Data Sheet

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU
Classification according to Regulation (EC) No. 1272/2008 [CLP]

1. Product and Company Identification

Product Name	TRIS BASE, <i>Molecular Biology Grade</i>
Product References	TBR0160 (1 kg)
Brand	TIARIS BIOSCIENCES Tiaris Biosciences SL. Parque Tecnológico Rabanales 21, Edificio Aldebarán, Calle Astrónoma Cecilia Payne s/n. 14014. Córdoba, España Phone: +34 681 867 714 mailto: info@tiarisbiosciences.com web: www.tiarisbiosciences.com
Manufacturer/ Supplier	
Emergency Telephone	900-868538 (CHEMTREC Spain) +34 931 768 545 (CHEMTREC International)

2. Hazards Identification

2.1. Classification According to Regulation (EC) N°1272/2008 (CLP)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2. Label Elements and Precautionary Statements

Pictogram	Signal Word
None	None

2.3. Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

3. Composition / Information on Components

Chemical Name	CAS Number	EC Number	Weight (%)	Classification according to Regulation (EC) No.1272/2008 [CLP]
Tris Base, tris(hydroxymethyl) aminomethane	77-86-1	201-064-4	1 kg	No components need to be disclosed according to the applicable regulation

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4. First-Aid Measures

Inhalation	Move person to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a doctor.
Skin Contact	Wash off immediately with plenty of water and soap for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.
Eye Contact	Flush with running water for 15 minutes. Requires medical attention.
Ingestion	Make victim drink water (two glasses at most). Consult doctor if feeling unwell.
Notes to Physician	Treat symptomatically.

5. Fire Fighting Measures

Extinguish Media	
Suitable Extinguish Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry powder.
Unsuitable Extinguish Media	For this substance/mixture no limitations of extinguishing agents are given.
Special hazards arising from the substance or mixture	Combustible. Fire may cause evolution of nitrogen oxides. Hazardous combustion gases or vapours are possible in the event of fire.
Advice for firefighters	Wear self-contained breathing apparatus and protective gear.

6. Accidental Release Measures

Personal Precautions, protective equipment and emergency procedures	Ensure adequate ventilation
	Avoid creation and inhalation of vapor or dust
	Use personal protection equipment
Environmental Precautions	Avoid discharge into drains and waterways whenever possible.
Methods and Material for Containment and Cleaning up	Cover drains. Pick up and arrange disposal without creating dust. Clean up affected area. Keep in suitable, closed containers for disposal.

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7. Handling and Storage

Precautions for Safe Handling	Always wear recommended Personal Protective Equipment. Do not get in eyes, on skin, or on clothing. Do not ingest. Provide suitable ventilation
Conditions for Safe Storage, Including Any Incompatibilities	Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. Store in accordance with local regulations.
Specific End Use(s)	For research use only

8. Exposure Control/ Personal Protection

Contains no substances with occupational exposure limit values.

Personal Protective Equipment:

Respiratory Protection

Where dusts are generated use respiratory protection based on DIN EN143, DIN 14387 standards; recommended filter type P1. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand 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 hands with soap and water.

Eye Protection

Safety glasses with side-shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Body Protection Impervious Clothing.

Wear appropriate clothing. When selecting clothing, consider the concentration and amount of substance to be handled.

Hygiene Measures

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

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9. Physical and Chemical Properties

Appearance:	Crystalline powder
Form:	Solid
Colour:	White
Odour:	Slight, characteristic
Molecular Formula	C ₄ H ₁₁ NO ₃
Molecular Weight	121.14 g/mol
pH (Value):	10.2-10.6 at 6 g/L (20°C)
Boiling Point:	288 °C
Melting / Freezing Point:	171-172 °C
Flash Point:	Not applicable
Flammable Limits:	No data
Auto Ignition Temperature:	No data
Decomposition Temperature:	143 °C
Explosive Properties:	No data
Oxidising Properties:	No data
Vapour Pressure (mm Hg):	No data
Density (g/L):	1.32 at 20 °C
Solubility (Water):	678 g/ L at 20°C
Solubility (Other):	<ul style="list-style-type: none"> - Ethanol: Soluble at 20 °C - Dimethylformamide: Soluble at 20 °C - Ethyl acetate: Slightly soluble at 20 °C - Acetone: Soluble at 20 °C - Chloroform: Practically insoluble at 20 °C
Partition Coefficient (n-Octanol: Water):	-2.31 (20 °C)

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10. Stability and Reactivity

Hazardous Reaction:	Violent reaction with: oxidizing agents, bases, nitrites, nitrates, nitrous acid, metals, copper.
Chemical Stability:	Stable under normal conditions. Hygroscopic.
Hazardous Decomposition Product(s):	Fire may cause evolution of nitrogen oxides. Development of hazardous combustion gases or vapours possible in the event of fire.
Conditions to avoid:	No data available
Incompatible Materials:	No data available

11. Toxicology Information

Acute toxicity:

LD50 Oral: Rat (female) > 5000 mg/kg (OECD Test Guideline 425).

LD50 Dermal : Rat (male & female) > 5000 mg/kg (OECD Test Guideline 402).

Skin corrosion/irritation: Rabbit, no skin irritation for 4 h (OECD Test Guideline 404).

Serious eye damage/eye irritation: Rabbit, no eye irritation for 4 h (OECD Test Guideline 405).

Respiratory or skin sensitization: no data available.

Germ cell mutagenicity:

Mutagenicity:

- Mammal cell test - chromosome aberration – Chinese hamster lung cells - Negative (OECD Test Guideline 473).
- Mammal cell test - chromosome aberration - Chinese hamster ovary cells -Negative (OECD Test Guideline 473).

Carcinogenicity:

IARC: Product and components are not regulated by IARC.

ACGIH: Product and components are not regulated by ACGIH.

NTP: Product and components are not regulated by NTP.

OSHA: Product and components are not regulated by OSHA.

Reproductive toxicity: no data available.

Teratogenicity: no data available.

Specific target organ toxicity – single exposure (GHS): no data available.

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Additional information:

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12. Ecological Information

Toxicity:	<ul style="list-style-type: none"> - <i>Daphnia</i> and other aquatic invertebrates: Static test EC₅₀ <i>Daphnia magna</i> > 980 mg/L, 48 h ((OECD Test Guideline 202). - Bacteria: Static test EC₅₀ Activated sludge > 1000 mg/L, 3 h(OECD Test Guideline 209).
Persistence and Degradability:	Readily biodegradable, 97.1%, 28 days (OECD Test Guideline 301F).
Bioaccumulative Potential	Not expected.
Mobility in Soil:	No data available.
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher
Other Adverse Effect:	Avoid discharge it into the environment.

13. Disposal Considerations

Waste treatment methods:

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. Empty containers may retain some product residues. This material and its container must be disposed of in according to approved disposal technique.

14. Transport Information

IATA / ADR / DOT-US / IMDG:	Not classified as dangerous in the meaning of transport regulations.
UN number or ID number:	Not classified as dangerous in the meaning of transport regulations.
UN Proper Shipping Name:	Not classified as dangerous in the meaning of transport regulations.
Transport Hazard Class(es):	Not classified as dangerous in the meaning of transport regulations.
Packing Group:	Not classified as dangerous in the meaning of transport regulations.
Environmental Hazards:	Not classified as dangerous in the meaning of transport regulations.
Special Precautions for User:	Not classified as dangerous in the meaning of transport regulations.
Maritime transport in bulk according to IMO instruments	Not classified as dangerous in the meaning of transport regulations.

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15. Regulatory Information

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

Substances of Very High Concern:	Not listed
Substance subject to authorization per REACH Annex XIV:	Not listed
Restricted substances under EC 1907/2006, Annex XVII:	Not applicable
Regulation (EC) No 649/2012 (Rotterdam Convention - export/import of dangerous chemicals):	Not applicable
Regulation (EU) No 2019/1021 (Stockholm Convention - persistent organic pollutants):	Not applicable
EU - Substances Depleting the Ozone layer (1005/2009):	Not applicable

16. Other Information

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 with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. *Tiaris Biosciences* shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.