

BIO BASIC INC.
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MATERIAL SAFETY DATA SHEET
REQUIRED UNDER SAFETY AND HEALTH REGULATION FOR SHIP REPAIRING

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DATE UPDATED: FEBRUARY 19, 2015

SECTION 1. ----- CHEMICAL IDENTIFICATION -----

Product Name Tris Acetate
Product Code(s) 0189
Recommended Use For Further Manufacturing Use Only
Not for Human or Animal Drug Use

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

GHS - Classification

Classification Skin Irritant 2 Eye Irritant 2
Signal Word Warning



Hazard Statements H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation

Precautionary Statements P280 - Wear protective gloves/protective clothing/eye protection/face protection
P302+ P352 - IF ON SKIN: 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 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, acetate (salt)	EEC No. 229-939-6	Not available	6850-28-8	95-100	-

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

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician
Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
Inhalation	Move to fresh air. If breathing becomes difficult, give oxygen
Ingestion	Clean mouth with water and afterwards drink plenty of water
Notes to Physician	Treat symptomatically

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Flammable Properties	Not flammable
Flash Point	Not applicable
Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam
Hazardous Combustion Products	Carbon oxides, Nitrogen oxides (NOx).
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	Not sensitive
Sensitivity to Static Discharge	Not sensitive
Protective Equipment and Precautions for Firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

Personal Precautions	Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation
Methods for Containment	Prevent further leakage or spillage if safe to do so
Methods for Cleaning Up	Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. ----- HANDLING AND STORAGE-----

Handling	Handle in accordance with good industrial hygiene and safety practice
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place
Incompatible Products	Strong oxidizing agents. Acids.

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

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, acetate (salt) 6850-28-8			

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.
Skin and Body Protection Wear protective gloves/clothing
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

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

Appearance White
Odor No information available
Odor Threshold No information available
Decomposition Temperature °C No information available
Freezing Point No information available
Initial Boiling Point No information available
Physical State Crystalline Powder
pH No data available
Flash Point Not applicable
Autoignition Temperature No data available
Boiling Point/Range No data available
Melting Point/Range No data available
Flammability Limits in Air **Upper** No data available **Lower** No data available
Explosive Properties No information available
Oxidizing Properties No information available
Evaporation Rate No data available
MMHG @ 37.8 C No data available
Vapor Density No data available
Specific Gravity No data available
Solubility Water-soluble
Partition Coefficient (n-octanol/water) No data available
Viscosity No information available

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

Stability Stable under recommended storage conditions
Incompatible Products Strong oxidizing agents. Acids.
Conditions to Avoid None known based on information supplied
Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx).

Hazardous Polymerization Hazardous polymerization does not occur

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

Acute Toxicity

Product Information Causes skin, eye and respiratory tract irritation.

Chronic Toxicity

Chronic Toxicity No known effect based on information supplied

Target Organ Effects None known.

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

Ecotoxicity

The environmental impact of this product has not been fully investigated

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

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

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

IATA Not regulated

DOT Not regulated

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

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, acetate (salt)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
1,3-Propanediol, 2-amino-2-(hydroxymethyl) -, acetate (salt) 6850-28-8 (95-100)	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Does not Comply
IECSC	Does not Comply
KECL	Does not Comply
PICCS	Does not Comply
AICS	Does not Comply

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990

CERCLA

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

International Regulations

Mexico - Grade No information available.

Canada

WHMIS Hazard Class

D2B Toxic materials



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

Issuing Date	13-Aug-2009
Revision Date	19-Feb-2015
Revision Note	No information available.
Recommended Restrictions	No information available

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.

End of MSDS



SAFETY DATA SHEET

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

Version: 2021

Date Updated: March 30, 2021

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

Product Name Tris acetate
Product Code(s) TD0101
Recommended Use For Laboratory Research Use Only
Not for Human or Animal Drug Use

Supplier Bio Basic Inc.
Address 20 Konrad Crescent, Markham, Ontario,
Canada, L3R 8T4
Telephone (905) 474 4493
Fax (905) 474 5794
For Chemical Emergency Phone# (416) 995 9730

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

Classification of the substance or mixture

Not a hazardous substance or mixture.

GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

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

Chemical Name	EC No.	CAS-No	Weight %
Tris acetate	229-939-6	6850-28-8	<100

No components need to be disclosed according to the applicable regulations.

SECTION 4. ----- 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 section 11

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. ----- FIRE FIGHTING MEASURES -----

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx)

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

No special environmental precautions required.

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.

Keep in a dry place.

Storage class (TRGS 510): 11: Combustible Solids

Specific end use(s)

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

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

Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

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: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

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 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

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).

Control of environmental exposure

No special environmental precautions required.

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

Information on basic physical and chemical properties

- | | |
|---|--------------------------------------|
| a) Appearance | Form: powder
Colour: white |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | 6.0 - 7 at 90.6 g/l at 25 °C (77 °F) |
| e) Melting point/freezing point | No data available |
| 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 | 90.6 g/l at 20 °C (68 °F) - completely soluble |
| o) Partition coefficient: 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 |

Other safety information

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

No data available

Incompatible materials

Oxidizing agents, Acids

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
Other decomposition products - No data available In the event of fire: see section 5

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

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

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.

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

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

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

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

Toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

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

IATA

Not dangerous goods

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

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.

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Issuing Date: 30-Mar-2021

End of SDS



CERTIFICATE OF ANALYSIS

Product	Tris acetate
Product Code	TD0101
Grade	High Purity
Formula	$C_4H_{11}NO_3 \cdot C_2H_4O_2$
MW	181.19
CAS#	6850-28-8
Lot	

Test Items	Specifications	Results
Appearance	White powder	
Purity	99.0% ~ 101.0%	
MP	117 ~ 123°C	
Solubility (0.5M aq.)	Clear colorless solution	
Heavy Metals	≤5ppm	
Loss on drying	≤3.0%	
pH (0.5 aq.)	6.0 ~ 7.0	
Sulfate	≤50ppm	
Chloride	≤50ppm	
UV @ 260nm (0.5aq.)	≤0.06	
UV @ 280nm (0.5aq.)	≤0.05	

Storage: Store at room temperature. Protect from moisture.