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SAFETY DATA SHEET

Section 1. Identification

Product Name: Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)bismuth(III)

Product Type: Solid

CAS Number: 142617-53-6

Product Number: B17536

Recommended Use: Laboratory chemicals, synthesis of substances.

Uses Advised Against: This product is being supplied under the TSCA R&D Exemption (40

CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless

appropriate consent is granted in writing by Ereztech LLC.

Product Manufacturer: Ereztech LLC

11555 Medlock Bridge Road, Suite 100

Johns Creek, GA 30097

Product Information: (888) 658-1221

In Case of an Emergency: CHEMTREC: 1-800-424-9300 (USA);

+1 703-527-3887 (International); CCN836180
*** Contact manufacturer for all non-emergency calls.

Section 2. Hazards Identification

Appearance/Odor: White to off-white powder or crystals; odor not determined.

Classification: ACUTE TOXICITY, ORAL – Category 4, H302

ACUTE TOXICITY, DERMAL – Category 4, H312 SKIN CORROSION/IRRITATION – Category 2, H315

SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2, H319

ACUTE TOXICITY, INHALATION - Category 4, H332

SPECIFIC TARGET ORGAN TOXICITY, SINGLE EXPOSURE; RESPIRATORY TRACT IRRITATION – Category 3, H335

GHS Label Elements Hazard Pictograms:



Section 2. Hazards Identification

Signal Word: DANGER

Hazard Statements: H302: Harmful if swallowed.

H312: Harmful in contact with skin.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H335: May cause respiratory irritation.

Precautionary Statements

Prevention: P261: Avoid breathing dusts, aerosols, vapors or gases.

P264 + P265: Wash hands and exposed skin thoroughly after

handling. Do not touch eyes.

P270: Do not eat, drink, or smoke when using this product.

P271: Use only outdoors or with adequate ventilation.

P280: Wear protective gloves/protective clothing/eye protection/

face protection.

P301 + P317: IF SWALLOWED: Get medical help. Response:

P302 + P352: IF ON SKIN: Wash with plenty of water.

P304 + P340: IF INHALED: Remove person to fresh air and keep

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.

P317: Get medical help.

P330: Rinse mouth.

P332 + P317: If skin irritation occurs: Get medical help.

P337 + P317: If eye irritation persists: Get medical help.

P362 + P364: Take off contaminated clothing and wash it before

reuse.

P403 + P233: Store in a well ventilated place. Keep container Storage:

tightly closed.

P405: Store locked up.

Disposal: P501: Dispose of contents/container in accordance with federal,

state and local regulations.

OSHA/HCS Status: This material is considered hazardous by the OSHA Hazard

Communication Standard (29 CFR 1910.1200).

Hazards Not Otherwise

Classified (HNOC):

None identified.

Section 3. Composition/Information on Ingredients

Substance Type: Mono-constituent.

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Section 3. Composition/Information on Ingredients

Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)(III)bismuthine; Synonyms:

Bi(TMHD)3.

Formula: $C_{33}H_{57}BiO_6$ 758.74 g/mol. Molecular Weight: 621-961-8 EC-No.:

Component Name	%	CAS Number
Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)bismuth(III)	≥ 98	142617-53-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First Aid Measures

Description of Necessary First Aid Measures

General Advice: Move out of dangerous area. Get medical help. Show this safety data sheet to

> the doctor in attendance. If unconscious, place in recovery position and get medical help immediately. Maintain an open airway. Loosen tight clothing such

as a collar, tie, belt or waistband.

Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and

> lower eyelids. Check for and remove any contact lenses if easy to do. Continue rinsing. Get medical help if irritation develops and persists, if symptoms develop

or if you feel unwell.

Skin Contact: Take off contaminated clothing and shoes immediately. Wash off contaminated

skin with plenty of water. Get medical help.

Inhalation: Get medical help. Rescuer should wear a mask or self-contained breathing

> apparatus if it is suspected that dusts, aerosols or gases are still present. Remove person to fresh air and keep comfortable for breathing. If not

breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Do not use the mouth-tomouth method of resuscitation if victim ingested or inhaled the product; give artificial respiration with the aid of a pocket mask equipped with a one-way valve

or other proper respiratory medical devices.

Get medical help. Rinse mouth, and then give water to drink (two glasses at Ingestion:

> most). Do NOT induce vomiting. Remove dentures if any. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If person is not breathing, if breathing is irregular or if respiratory arrest occurs, see the "Inhalation" first aid

measures noted above.

Section 4. First Aid Measures

Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

Eye Contact: Symptoms may include stinging, tearing, redness, swelling and blurred vision.

Inhalation: The acute effects of inhalation of this product have not been determined.

Symptoms may include coughing, shortness of breath/ difficulty in breathing

(dyspnea), nausea and headaches.

Skin Contact: The acute effects of dermal contact of this product have not been fully

determined. Symptoms may include reddening of skin, a burning or itching

sensation, pain, blistering and tissue necrosis.

Ingestion: The acute effects of ingestion of this product have not been fully determined.

Symptoms may nausea, vomiting (emesis), abdominal pain and diarrhea.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary

Notes to Physician: Treat symptomatically.

Specific Treatments: No specific treatment.

Protection of First Responders: No action taken shall be taken involving any personal risk

without suitable training. It may be dangerous to the person

providing aid to give mouth-to-mouth resuscitation.

See Toxicological Information (Section 11)

Section 5. Fire Fighting Measures

General Hazards: None identified.

Suitable Extinguishing Media: Use extinguishing measures and media that are appropriate to

the local circumstances and the surrounding environment.

Unsuitable Extinguishing Media: None identified.

Unusual Fire and None identified.

Explosion Hazards:

Product of Combustion:

Explosion ridzards.

and bismuth oxides. Irritating fumes and organic acid vapors may be generated during exposure to elevated temperatures

Products of complete combustion are carbon oxides (CO_x) ,

or open flame.

Protection of Firefighters: Promptly isolate the scene by removing all persons from the

vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Avoid contact with skin or eyes. Avoid the formation and

inhalation of dusts, aerosols, vapors and gases.

Fire-fighters should wear appropriate protection equipment and self-contained breathing apparatus (SCBA) with a full

face-piece operated in a positive pressure mode.

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For Non-Emergency Personnel: No action shall be taken involving any personal risk or without

suitable training. Evacuate surrounding areas. Keep

unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid the formation and inhalation of dusts, aerosols, vapors and gases. Provide adequate ventilation. Wear respiratory protection. Put on

appropriate personal protective equipment.

For Emergency Responders: If specialized clothing is required to deal with the spillage, take

note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency

Personnel".

Environmental Precautions: Do not allow dispersal of spilled material and contact with soil,

waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers,

waterways, soil or air).

Methods for Containment

General:

Small Spill:

formation and inhalation of dusts, aerosols, vapors and gases. Dispose of collected spillage in accordance with federal, state and local regulations. Contaminated absorbent material may nose the same hazard as the spilled product.

Move containers from spill area if safe to do so. Avoid the

pose the same hazard as the spilled product.

Collect spillage with a dry, binding material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed

container for disposal.

Large Spill: Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and

collect spillage with a dry, binding material (e.g. dry sand, vermiculite or diatomaceous earth) and place in dry, sealed

container for disposal.

Note: see Section 1 for emergency contact information and

Section 13 for waste disposal.

Section 7. Handling and Storage

Precautions: Product is hygroscopic; handle under a dry, inert gas. Nitrogen

with less than 5 ppm each of moisture and oxygen is

recommended. Keep container tightly sealed. Avoid contact with skin, eyes and clothing. Do not ingest. Avoid the

formation and inhalation of dusts, aerosols, vapors and gases. Avoid prolonged exposure. Ensure adequate ventilation.

Section 7. Handling and Storage

Protective Measures: Put on appropriate personal protective equipment (see Section

8). Keep in the original container kept tightly closed when not in use. Empty containers retain product residue and can be

hazardous. Do not reuse container.

General Occupational Hygiene: Eating, drinking and smoking should be prohibited in areas

where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective

equipment before entering eating areas. See also Section 8 for

additional information on hygiene measures.

Safe Storage Conditions: Product is hygroscopic; store under an inert gas. Nitrogen with

less than 5 ppm each of moisture and oxygen is recommended. Store in original container protected from direct sunlight in a dry and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed

until ready for use. Store locked up.

Section 8. Exposure Controls/Personal Protection

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling

procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should

be handled in accordance with Section 13.

Occupational Exposure Limits: Product contains no substances with occupational exposure

limit values.

Engineering Controls: Properly operating chemical fume hood designed for hazardous

chemicals and having an average face velocity of at least 100

feet per minute. Provide an eyewash/shower station.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should

be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable

levels.

Individual Protection Measures

Hygiene Measures: Wash hands, forearms and face thoroughly after handling

chemical products, before eating, smoking and using the

lavatory and at the end of the working period.

Section 8. **Exposure Controls/Personal Protection**

Hygiene Measures (cont.):

Remove all soiled and contaminated clothing immediately. Do not inhale fumes, aerosols or vapors. Avoid contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/Face Protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or aerosols. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemicalresistant 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. For full contact, wear Neoprene or nitrile rubber gloves.

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator

is the sole means of protection, use a full-face supplied air

respirator.

Skin Protection Hand Protection:

Other Skin Protection:

Respiratory Protection:

Section 8. Exposure Controls/Personal Protection

Respiratory Protection (cont.): Use respirators and components tested and approved

under appropriate government standards such as NIOSH

(US) or CEN (EU).

Section 9. Physical and Chemical Properties

Physical State: Solid (powder or crystals).

Color:White to off-white.Odor:No data available.Odor Threshold:No data available.Melting Point:89 °C (192.2 °F).

Boiling Point: 114 – 116 °C (237.2 – 240.8 °F).

Flash Point:

Auto-ignition temperature:

No data available.

Water Solubility: Insoluble.

Section 10. Stability and Reactivity

Reactivity: Based on available data, product is not deemed to represent a reactivity hazard.

Chemical Stability: This product is stable when stored under a dry, inert

atmosphere and away from heat. Nitrogen containing less

than 5 ppm each moisture and air is recommended.

Conditions to Avoid: Exposure to air/water/moisture, extremes of temperature

and direct sunlight.

Incompatible Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Hazardous decomposition products formed under fire

conditions: carbon oxides (CO_X) and bismuth oxide fumes.

Irritating fumes and organic acid vapors may be

generated during exposure to elevated temperatures or

open flame. In the event of a fire: see Section 5.

Possibility of Hazardous Reactions: Under normal conditions of storage and use noted above,

hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of

storage or use.

Section 11. Toxicological Information

Information on Toxicological Effects

Acute Toxicity

Component	CAS No	Result	Species	Dose	Exposure	
Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)bismuth(III)	142617-53-6	LD50 Oral	ATEmix	500 mg/kg	-	

Irritation/Corrosion: No specific data available. Product may be expected to

be irritating to exposed skin and eye tissues.

Sensitization: No specific data available.

Germ Cell Mutagenicity: No specific data available.

Carcinogenicity

NTP

OSHA

No component of this product present at levels greater

than 0.1% is identified as probable, possible or

confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater

than 0.1% is identified as probable, possible or

confirmed human carcinogen by ACGIH.

No component of this product present at levels greater

than 0.1% is identified as probable, possible or

confirmed human carcinogen by NTP.

No component of this product present at levels greater

than 0.1% is identified as probable, possible or

confirmed human carcinogen by OSHA.

Reproductive Toxicity:No specific data available.

Teratogenicity: No specific data available.

Specific Target Organ Toxicity: Respiratory tract irritation.

(Single Exposure)

Specific Target Organ Toxicity: No specific data available. (Repeated Exposure)

Aspiration Hazard: No specific data available.

Information on the Likely Common routes of exposure: inhalation (failure to

Routes of Exposure: prevent dust formation), dermal (failure to use skin

protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking after handling product

without washing hands or using hand protection).

Additional Information: To the best of our knowledge, the chemical, physical

and toxicological properties of this product have not

been thoroughly investigated.

Section 12. Ecological Information

Numerical Measures of Toxicity: No specific data available.

Persistence and Degradability

Biodegradability: No specific data available.

Bioaccumulative Potential: No specific data available.

Mobility in Soil: No specific data available.

Results of PBT and vPvB Assessment: PBT/vPvB assessment not available as chemical safety

assessment not required/not conducted.

Endocrine Disrupting Properties: No specific data available.

Other Adverse Effects:

An environmental hazard cannot be excluded in the

event of unprofessional handling or disposal.

Section 13. Disposal Considerations

Waste Treatment Methods

Product:

Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

Contaminated Packaging: Empty containers retain product residue (liquids,

aerosols, vapors, gases) and can be dangerous. Dispose

of as unused product.

Section 14. Transport Information

	DOT	IMDG	IATA
UN Number	Not regulated	Not regulated	Not regulated
UN Proper Shipping Name	-	-	-
Transport Hazard Classes	-	-	-
Packing Group	-	-	-
Environmental Hazards	-	-	-
Additional Information	-	-	-

Special Precautions for User: Transport within user's premises: always transport in

closed containers that are upright and secure. Ensure that persons transporting the product know what to do in

the event of an accident or spillage.

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Section 15. Regulatory Information

TSCA (Toxic Substance Control Act):

This product is not listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory). Use of this product is restricted to research and development only. This product must be used under the supervision of a technically qualified individual as defined by the TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

This product as supplied is not subject to the TSCA Significant New Use Rule.

This product as supplied is not subject to TSCA 12(b) export notification requirements.

SARA 302 Components

This product does not contain any components which are subject to the reporting requirements of SARA Title III. Section 302 EHS TPQ.

SARA 304 Components

This product does not contain any components which are subject to the reporting requirements of SARA Title III, Section 304 RQ.

SARA 311/312 Hazards

Acute Health Hazard (Acute Toxicity (Oral, Dermal, Inhalation); Skin corrosion or irritation; Serious eye damage or eye irritation; Specific target organ toxicity, single exposure: respiratory tract irritation).

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Not applicable.

Clean Water Act

Not applicable.

CERCLA Reportable Quantity

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Right-to-Know Listings

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)bismuth(III)	-	-	-	-	-

[&]quot;X" - Listed.

Section 15. Regulatory Information

US State Chemicals of High Concern Listings

Component	Maine	Vermont	Washington
Tris(2,2,6,6-tetramethyl-3,5-heptanedionato)bismuth(III)	-	-	•

[&]quot;X" - Listed.

California Proposition 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Section 16. Other Information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Rating

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

History

4/3/2025. Date of Issue/Date of Revision: None. Date of Previous Issue:

None available. References:

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Section 16. Other Information

Abbreviations and Acronyms

ACGIH : American Conference of Governmental Industrial Hygienists.

AIHA : American Industrial Hygiene Association.

ATE : Acute Toxicity Estimate (per Chapter 3.1 of GHS 10 standard).

BEI : Biological Exposure Indices (ACGIH).

CAS : Chemical Abstracts Service (division of the American Chemical Society).

CHRIS : Chemical Hazards Response Information System (US DOT).

CLP : Classification, Labeling and Packaging (European Union (EU)).

DOT : US Department of Transportation.

EC-No. : The EC Inventory (EINECS, ELINCS and the NLP-list is the source of the seven digit

EC number, an identifier of substances commercially available with the EU (European

Union).

EINECS : European Inventory of Existing Commercial Chemical Substances.

EHS : Extremely Hazardous Substance.

ELINCS : European List of Notified Chemical Substances.

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

HAP : Hazardous Air Pollutants (Clean Air Act).HMIS : Hazardous Materials Identification System.

HNOC : Hazards Not Otherwise Classified.

IARC : International Agency for Research on Cancer.

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulations by the "International Air Transport Association"

(IATA).

IDLH : Immediately Dangerous to Life or Health (US National Institute for Occupation Health

and Safety (NIOSH)).

IMDG : International Maritime Code for Dangerous Goods.

IP : Intraperitoneal. IV : Intravenous.

NFPA : National Fire Protection Association.

NIOSH : National Institute of Occupational Safety and Health.

NSRL : No Significant Risk Levels. NTP : National Toxicology Program.

ODS : Ozone Depleting Substances (US Clean Air Act).

OECD : Organization for Economic Co-Operation and Development.

OEL : Occupational Exposure Limit.

OSHA : Occupational Safety and Health Administration.

PBT : Persistent Bioaccumulative and Toxic.

PEL : Permissible Exposure Limits.
REL : Recommended Exposure Limits.

RQ : Reportable Quantity.

SARA : Superfund Amendments and Reauthorization Act.

STEL (ST) : Short Term Exposure Limit (ACGIH/NIOSH)

STOT : Specific Target Organ Toxicity.

Section 16. Other Information

Abbreviations and Acronyms (cont.)

TLV : Threshold Limit Values (ACGIH).TPQ : Threshold Planning Quantity.TWA : Time Weighted Average.VOC : Volatile Organic Compound.

vPvB : Very Persistent and Very Bioaccumulative.

WEEL: Workplace Environmental Exposure Level (AIHA).

Disclaimer

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

