Safety Data Sheet (SDS)

Revision Number: **3.0**	*Last updated* February 17, 2021

1. Product and Company Identification

Product Name:	TBTU; 2 - (1H - Benzotriazole - 1 - yl) - 1,1,3,3 - tetramethyluronium tetrafluoroborate
Manufacturer/Supplier:	AnaSpec, Inc. www.anaspec.com 34801 Campus Drive Fremont, CA 94555 Tel: 510-791-9560 Fax: 510-791-9572 Email: service@anaspec.com Kaneka Eurogentec SA, Rue du Bois Saint Jean 5 4102 Seraing Belgium Tel. +32-4-3727400 Fax. +32-4-3727500 E-mail info@eurogentec.com Kaneka Eurogentec Helpdesk Tel. +32-4-3727665
Catalog Number	AS-20376, AS-20376-1000, AS-20377

2. Hazards Identification

Emergency Overview: We do recommend handling all chemicals with caution. Use proper protective equipment when handling chemicals. To our knowledge, the hazards of this material have not been thoroughly investigated.

GHS Hazard Classification:

H228 Flammable solid
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H303,H313, Maybe harmful if swallowed or in contact with skin. Wear PPE

GHS Signal Words: DANGER

GHS Hazard Symbol/Pictogam:

GHS Hazard Statements:
P210 Keep away from heat/sparks/open flames/hot surfaces.- No smoking.
P240 Ground/bond containers and receiving equipment
P241 Use explosion-proof electrical/ventilating/lighting/ equipment.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.
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.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P403+P233 Store in well-ventilated place. Keep containers tightly closed.
P405 Store locked up
P501 Dispose of contents/containers to an approved waste disposal plant.

Potential Health Effects for:
Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Skin: In case of contact, immediately wash skin with soap and copious amount of water.

Eyes: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Chronic Exposures: No information available. We recommend limiting prolonged exposure.

Target Organs: No information available

HMIS Classification
Health hazard: 2
Flammability: 0
Reactivity Hazard: 0

NFPA Rating
Health hazard: 2
Fire: 0
Reactivity Hazard: 0

3. Composition / Information on Ingredients

Ingredients/Components:

TBTU; 2 - (1H - Benzotriazole - 1 - yl) - 1,1,3,3 – tetramethyluronium tetrafluoroborate
Molecular formula: C11H16N5OBF4
Molecular weight: 321.1
CAS-No 125700-67-6
EC-No N/A

4. First Aid Measures

Inhalation:	If inhaled, move to fresh air. If not breathing, give artificial respiration.
Ingestion:	If swallowed, wash mouth with water if the person is conscious. Call a physician.
Skin:	In case of skin contact, flush with plenty amount of water at least 15 minutes.
Eyes:	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician

5. Fire Fighting Measures

Extinguishing media:	Water spray or fog. Alcohol resistant foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide
Special firefighting procedures:	Alert Emergency Responders and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire. Equipment should be thoroughly decontaminated after us
Unusual fire and explosions hazards:	Emits toxic fumes under fire conditions

6. Accidental Release Measures

Spill response	Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact by using protective equipment. Use dry clean up procedures and avoid generating dust. Place in a suitable, labeled container for waste disposal
Containment	Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. DO NOT enter confined spaces until atmosphere has been checked. DO NOT allow material to contact humans, exposed food or food utensils.

	Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Use good occupational work practice. Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source. Do NOT cut, drill, grind or weld such containers
PPE	Use personal protective equipment

7. Handling and Storage

Store at 4 °C desiccated and protected from light. Store away from oxidizing agent.

8. Exposure Controls / Personal Protection

Engineering controls	Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction. Exhaust ventilation should be designed to prevent accumulation and re-circulation of particulates in the workplace. If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of: (a): particle dust respirators, if necessary, combined with an absorption cartridge; (b): filter respirators with absorption cartridge or canister of the right type; (c): fresh-air hoods or masks Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding. Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to efficiently remove the contaminant.
PPE	Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose 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. 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 and dry hands. Eye protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin and body protection Complete suit protecting against chemicals, Flame retardant antistatic protective clothing,

	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Hygiene measures Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

9. Physical and Chemical Properties

Physical State	Solid
Odour	Not available
Solubility in Water	Not available
Specific Gravity	Not available
pH	Not available
Boiling Point	N/A
Melting Point	Not available
Flash Point	N/A
Vapor Pressure:	N/A
Vapor Density:	N/A

10. Stability and Reactivity

Thermal Decomposition	No data available
Dangerous Products of Decomposition	No data available
Dangerous Reactions	COx, NOx when burned

Keep container tightly closed in a dry well-ventilated place. Store in 4°C refrigerator.

11. Toxicological Information

RTECS Number	N/A
Toxicity	No information available.
Health Hazards	Although ingestion is not thought to produce harmful effects, the material may still be damaging to the health of the individual following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
Potential Hazards	Not available
Carcinogenicity:	No significant acute toxicological data identified
OSHA Permissible Exposure Limit(PEL) Data	N/A
ACGIH Threshold Limit Values (TLV)	N/A

Reproductive Toxicity: No information available

12. Ecological Information

No information available.

13. Disposal Considerations

All waste must be handled in accordance with local, state and federal regulations. Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

14. Transport Information

Hazard Class	N/A
Identification Number	N/A
Packing Group	N/A
Proper Shipping Name (DOT)	N/A

15. Regulatory Information

California Proposition 65: N/A
US TSCA (Toxic Substance Control Act): N/A
US CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act: N/A
US SARA Title III (Superfund Amendments and Reauthorization Act: N/A
US Other: N/A
EC EINICS (European Inventory of Existing Commercial Chemical Substances) Number: N/A
EC Risk Statements: N/A
Other Country Regulations: N/A

16. Other Information

It is not intended for food, drug, household, agricultural or cosmetic use. A technically qualified individual experienced in handling potentially hazardous chemicals must supervise its use. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Users should make independent decisions regarding completeness of the information based on all sources available. AnaSpec shall not be held liable for any damage resulting from handling or from contact with the above product.