

## SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

**CAS Number:** 540-88-5  
**Product Name:** Tert-Butyl Acetate  
**Revision Date:** Jan 25, 2018 **Date Printed:** Dec 10, 2020  
**Version:** 1.2 **Supersedes Date:** Apr 12, 2020  
**Manufacturer's Name:** Thames River Chemical Corp.  
**Address:** 5230 Harvester Road Burlington, ON, CA, L7L 4X4  
**Emergency Phone:** CHEMTREC (800) 424-9300  
**Information Phone Number:** 905-681-5353  
**Fax:** 905-681-5377  
**Product/Recommended Uses:** For laboratory or industrial use only.

## SECTION 2) HAZARDS IDENTIFICATION

### Classification

Flammable Liquids - Category 2

### Pictograms



### Signal Word

Danger

### Hazard Statements - Physical

Highly flammable liquid and vapor

### Precautionary Statements - General

If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

### Precautionary Statements - Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical, ventilating, lighting equipment.

Use only non-sparking tools.

Take action to prevent static discharges.

Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary Statements - Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

In case of fire: Use carbon dioxide, alcohol foam, water spray or dry chemical to extinguish.

### Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local/national/international regulation. Waste management should be in full compliance with national, regional and local laws.

### Physical Hazards Not Otherwise Classified

No data available.

### Health Hazards Not Otherwise Classified

No data available.

## SECTION 3) COMPOSITION/INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000540-88-5	TERT-BUTYL ACETATE	100% - 100%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality or to reflect batch to batch variation.

## SECTION 4) FIRST-AID MEASURES

### Inhalation

Get medical advice/attention if you feel unwell or are concerned. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Eliminate all ignition sources if safe to do so. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor.

### Eye Contact

If eye irritation persists: Get medical advice/attention. Seek medical attention.

### Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Store contaminated clothing under water and wash before re-use or discard. Rinse skin with water/shower and mild soap for 5 minutes or until product is removed.

### Ingestion

Seek immediately medical advice.

Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of material into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended.

### Most Important Symptoms and Effects, Both Acute and Delayed

Eyes: Causes eye irritation with inflammation, itching, swelling, pain and blurred vision. Exposure to vapor may cause eye dryness and irritation.

Skin: May cause skin irritation with localized redness, itching and discomfort. Prolonged contact may cause defatting of the skin and dermatitis.

Inhalation: Inhalation of mist or vapor causes irritation of the upper respiratory tract. Symptoms may include headache, cough shortness of breath, dizziness, nausea and narcosis. May cause damage to the mucous membranes of the nose and nasal cavity. Harmful if inhaled.

Ingestion: Causes irritation of the digestive tract with nausea, vomiting, abdominal pain and diarrhea. May be harmful if ingested in large quantities. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation, pulmonary edema and other lung injury.

Chronic: Individuals with pre-existing skin conditions and respiratory disorders may be more susceptible to the effects of this product. Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis or aggravate existing skin conditions

### Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

## SECTION 5) FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Do NOT direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.

Water spray or fog.

Foam.

Dry chemical powder.

BCF (where regulations permit). Use caution when applying carbon dioxide in confined spaces. Large Fire: Water spray, fog or alcohol-resistant foam.

### Unsuitable Extinguishing Media

Do not use straight stream of water.

### Specific Hazards in Case of Fire

Many vapors are heavier than air. Containers may explode in fire. Many liquids are lighter than water. May form an ignitable vapor/air mixture in closed tanks or containers. Runoff to sewer may create fire or explosion hazard. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flashback. Vapors will spread along ground and collect in low or confined areas (sewers, basements, tanks). Polymer: May polymerize explosively when heated or involved in a fire. Fire will produce irritating gases.

### Fire-fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Move undamaged containers from immediate hazard area if it can be done safely. Stop spill/release if it can be done safely. Cool containers with flooding quantities of water until well after fire is out.

Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Product has a low flashpoint: Use of water spray when fighting fire may be inefficient. Nitromethane and nitroethane: Do not use dry chemical extinguishers to control fires.

Large Fire: Dike fire-control water for later disposal; do not scatter the material

### Special Protective Actions

Wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations where direct contact with the substance is possible.

## SECTION 6) ACCIDENTAL RELEASE MEASURES

### Emergency Procedure

Stay uphill and/or upstream. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded. Evacuate and isolate hazard area and keep unauthorized personnel away. A vapor-suppressing foam may be used to reduce vapors.

### Recommended Equipment

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

### Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing.

### Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers. Dike far ahead of liquid spill for later disposal.

### Methods and Materials for Containment and Cleaning up

Approach spill from upwind direction. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material using non-sparking tools and place into an approved container for proper disposal. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains.

Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean, non-sparking tools to collect absorbed material. Ventilate area after clean-up is complete.

## SECTION 7) HANDLING AND STORAGE

### General

Wash hands after use. Do not get in eyes, on skin or on clothing. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use good personal hygiene practices. Eating, drinking and smoking in work areas is prohibited. Remove contaminated clothing and protective equipment before entering eating areas. This product is not intended for human or animal consumption. Use pneumatic and/or mechanical systems for bulk transfer of the substance. Use exhaust ventilation and/or dust collecting filters for bulk transfer and storage. Use approved respiratory protection when handling. Keep bulk of materials out of sewer drains.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. Report ventilation failures immediately. The use of

local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

This material may attack some forms of plastics, rubbers, and coatings. Consult suppliers of these materials for specific recommendations. Steel drums are recommended for packaging.

Do not store large quantities of flammable liquids in the same storage cabinet. Store in dry, cool areas, out of direct sunlight and away from other sources of heat. Store in original containers. Keep containers securely sealed. Keep away from incompatible materials (e.g. oxidizers). Store flammable and combustible liquids in areas that are cool, dry and well ventilated to reduce vapour concentrations. Never use plastic or glass containers for storing flammable liquids. Keep containers securely sealed when not in use. Bond and ground metal containers/cylinders when transferring. Avoid storing in direct sunlight or near other heat sources; eliminate all sources of ignition. Cabinets must be labelled; FLAMMABLE - KEEP FIRE AWAY. Avoid storing in basements. Protect containers against banging or other physical damage when storing, transferring, or using them.

## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye protection

Wear indirect-vent, impact and splash resistant goggles when working with liquids

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber.

### Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 should be followed. Check with respiratory protective equipment suppliers.

### Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	CANsmg	CANspmm	CANtmg	CANtppm	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA TWA (mg/m3)	OSHA TWA (ppm)
TERT-BUTYL ACETATE	1187	250	950	200			950	200

Chemical Name	OSHA Carcinogen	OSHA Tables (Z1, Z2, Z3)	OSHA Skin designation	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH TWA (mg/m3)	ACGIH TWA (ppm)	ACGIH TLV Basis
TERT-BUTYL ACETATE		1			150		50	Eye & URT irr

Chemical Name	ACGIH Carcinogen	ACGIH Notations
TERT-BUTYL ACETATE		

irr - Irritation, URT - Upper respiratory tract

## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Density	7.23 lb/gal
Specific Gravity	0.87
Appearance	clear, colourless liquid
Odor Description	characteristic ester, fruity odour
Odor Threshold	N/A
pH	6-7

Melting/Freezing Point	-58 °C
Low Boiling Point	97.85 °C
High Boiling Point	98 °C
Flash Point	4.4 °C
Vapor Pressure	41.5 mmHg
Vapor Density	4.0
Evaporation Rate	not known
Upper Explosion Level	6.88
Lower Explosion Level	1.26
Water Solubility	<0.80 wt % @ 22°C
Coefficient Water/Oil	1.64
Viscosity	<1 mPa

## SECTION 10) STABILITY AND REACTIVITY

### Reactivity

Not sensitive to mechanical impact. Stable material

### Possibility of hazardous reactions

Vapors may form explosive mixture with air. Hazardous polymerization will not occur.

### Stability

tert-Butyl acetate may soften or dissolve plastics

Stable under normal storage and handling conditions.

### Conditions to Avoid

Avoid heat, sparks, open flames and other ignition sources.

### Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

### Incompatible Materials

Strong bases. Strong oxidizing agents.

### Hazardous Decomposition Products

Acetic acid, tert-butanol

## SECTION 11) TOXICOLOGICAL INFORMATION

### Likely Route of Exposure

Inhalation, ingestion, skin absorption

### Acute Toxicity

LC50 (rat): 5160 ppm (4-hour exposure)

LC50 (rat): 13300 mg/m<sup>3</sup> (4-hour exposure)

LD50 (oral, rat): 3295 mg/kg

LD50 (oral, rat): 4500 mg/kg

LD50 (dermal, rabbit): greater than 2000 mg/kg (at 2000 mg/kg, 0/10 rabbits died; evaluated as reliable with restrictions)

LD50 (dermal, rabbit): greater than 20700 mg/kg (at 20700 mg/kg, 0/2 rabbits died; evaluated as reliable with restrictions)

Based on available data, the classification criteria are not met.

### Aspiration Hazard

Based on available data, the classification criteria are not met.

### Carcinogenicity

Based on available data, the classification criteria are not met.

### Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

### Reproductive Toxicity

Based on available data, the classification criteria are not met.

#### **Respiratory/Skin Sensitization**

Based on available data, the classification criteria are not met.

#### **Serious Eye Damage/Irritation**

Based on available data, the classification criteria are not met.

#### **Skin Corrosion/Irritation**

Based on available data, the classification criteria are not met.

#### **Specific Target Organ Toxicity - Repeated Exposure**

Based on available data, the classification criteria are not met.

#### **Specific Target Organ Toxicity - Single Exposure**

Based on available data, the classification criteria are not met.

#### **Likely Routes of Exposure**

Inhalation, Ingestion, Skin contact, Eye contact

#### **Potential Health Effects - Miscellaneous**

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Increased susceptibility to the effects of this material may be observed in people with preexisting disease of any of the following: central nervous system, eyes, gastrointestinal system, liver, skin.

## **SECTION 12) ECOLOGICAL INFORMATION**

#### **Bioaccumulative Potential**

This substance is not considered to be persistent or bioaccumulating

#### **Toxicity**

Large spills or discharges of this material may be harmful to aquatic life.

Toxicity to fish: LC50 - *Leuciscus idus* (Golden orfe); (96h): 361-423 mg/l

Toxicity to aquatic invertebrates: EC50 - *Daphnia Magna* (Water flea); (48h): 3968 mg/l

Based on available data, the classification criteria are not met.

#### **Mobility in Soil**

Slightly water soluble; moves readily in soil and water.

#### **Bio-accumulative Potential**

No data available.

#### **Persistence and Degradability**

This product is readily biodegradable.

#### **Other Adverse Effects**

No data available.

## **SECTION 13) DISPOSAL CONSIDERATIONS**

#### **Waste Disposal**

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. It is the responsibility of the user of the product to determine at the time of disposal whether the product meets local criteria for hazardous waste. Waste management should be in full compliance with national, provincial and local laws.

## **SECTION 14) TRANSPORT INFORMATION**

	Transport Canada Information	U.S. DOT Information
UN number:	UN1123	UN1123
Proper shipping name:	Butyl acetates	Butyl acetates
Hazard class:	3	
Hazard class:		3
Packaging group:	II	II
Hazardous substance (RQ):		No Data Available
Marine Pollutant:	No Data Available	No Data Available
Note / Special Provision:	Note / Special Provision	No Data Available
Toxic-Inhalation Hazard:		No Data Available
Transport in bulk (according to Annex II of MARPOL 73/78):	No Data Available	

## SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000540-88-5	TERT-BUTYL ACETATE	100% - 100%	DSL,TSCA,EU_EC_Inventory

## SECTION 16) OTHER INFORMATION

### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CANsmg or CANspmm - Canadian Short Term Exposure Level in mg/L or in ppm; CANtmg or CANtpmm - Canadian Time Weighted Average in mg/L or in ppm; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

### Version 1.2:

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### Version 1.1:

Revision Date: Jul 04, 2017

### Version 1.0:

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First Edition.

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