



From: Mallinckrodt Baker, Inc.
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24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300
National Response in Canada
CANUTEC: 613-996-6666
Outside U.S. And Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

Tributyl Citrate

1. Product Identification

Synonyms: None
CAS No. : 77-94-1
Molecular Weight: 360.45
Chemical Formula: C₁₈H₃₂O₇
Product Codes: W417

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Tributyl Citrate	77-94-1	98 - 100%	Yes

3. Hazards Identification

Emergency Overview

WARNING! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN INVESTIGATED.

Potential Health Effects

Inhalation:

None identified.

Ingestion:

None identified.

Skin Contact:

None identified.

Eye Contact:

None identified.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Prompt action is essential.

Ingestion:

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Contact:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use.

Eye Contact:

In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

5. Fire Fighting Measures

Fire:

Flash point: 157C (315F) 0C

Explosion:

None

Fire Extinguishing Media:

Water spray; Dry chemical; Carbon dioxide.

Special Information:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. Accidental Release Measures

Absorb material in sand or other suitable absorbent and place in container.

7. Handling and Storage

Keep from contact with oxidizing materials. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the substance is apparent, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Other Control Measures:

There is insufficient data in the published literature to assign complete numerical SAF-T-DATA* ratings and laboratory protective equipment for this product. Special precautions must be used in storage, use and handling. Protective equipment for laboratory bench use should be chosen

using professional judgment based on the size and type of reaction or test to be conducted and the available ventilation, with overriding consideration to minimize contact with the chemical.

9. Physical and Chemical Properties

Appearance:

Colorless to yellow liquid.

Odor:

No information found.

Solubility:

Negligible (< 0.1%)

Specific Gravity:

1.05

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

233C (451F) @ 22 mm Hg

Melting Point:

No information found.

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

Not applicable.

Evaporation Rate (BuAc=1):

0

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide, carbon monoxide.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Strong oxidizing agents.

Conditions to Avoid:

No information found.

11. Toxicological Information

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Tributyl Citrate (77-94-1)	No	No	None

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and

approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
Tributyl Citrate (77-94-1)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----				
Ingredient	Korea	DSL	Canada NDSL	Phil.
Tributyl Citrate (77-94-1)	Yes	No	Yes	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302- RQ	TPQ	-SARA 313- List	Chemical Catg.
Tributyl Citrate (77-94-1)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----				
Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)	
Tributyl Citrate (77-94-1)	No	No	No	

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No
Reactivity: No (Pure / Liquid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

Label Hazard Warning:

WARNING! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN INVESTIGATED.

Label Precautions:

No SAF-T-DATA Ratings have been developed for this product. Read and follow all warnings, precautions, instructions and other safety and handling information on the label and MSDS. Avoid breathing vapor. Use with adequate ventilation. Keep container closed. Wash thoroughly after handling.

Avoid contact with eyes, skin, clothing.

Label First Aid:

Not applicable.

Product Use:

Laboratory Reagent.

Revision Information:

New 16 section MSDS format, all sections have been revised.

Disclaimer:

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