



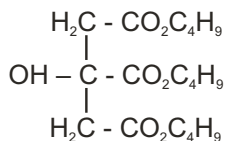
## TRI BUTYL CITRATE (TBC)



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Primary plasticizer for PVC and PVC copolymers

<b>Chemical Nature</b>	Citric acid ester of C <sub>4</sub> alcohol		
Chemical Name	:-	2-Hydroxy-1,2,3-Propanetricarboxylic Acid Tributyl Ester	
Trade Name	:-	TBC	
Molecular Formula	:-	C <sub>18</sub> H <sub>32</sub> O <sub>7</sub>	
Molecular Weight	:-	360.4	
Molecular Structure	:-	(C <sub>4</sub> H <sub>9</sub> COO) <sub>3</sub> (C <sub>3</sub> H <sub>4</sub> OH)	



CAS Number	:-	77-94-1
UN. NO	:-	
EINECS NO	:-	201-071-2

Specification	Characteristics	Unit	Test Method	Value
	Colour	HU	ASTM-D-1045-86	50 max.
	Volatile Loss (130°C/3Hrs)	wt. %	KLJTM	0.40 max.
	Ester Value	mg KOH/g	ASTM-D-1045-86	465-471.
	Acidity	wt. %	ASTM-D-1045-86	0.02 max.
	Moisture	wt. %	ASTM-E-203	0.30 max.
	Specific Gravity (27°C)	-	ASTM-D-1045-86	1.037-1.047
	Ester content	wt. %	ASTM-D-1045-86	99.00 min.
	Heat Stability (150°C/ 2Hrs)	HU	ISI-9591-96	No Change.
	Acidity after heat treatment	wt. %	ASTM-D-1045-86	0.03.
	Plasticizing Esters by GC	% by area	KLJTM	99.00 min.
	Residual alcohol	% by area	KLJTM	0.10 max.

#### Typical Properties

Boiling Point @ 7 mbar	°C	lit.	170.
Pour point	°C	lit.	-62.
Viscosity at 20°C	cp	KLJTM	33-35.
Flash Point	°C	KLJTM	184.
Refractive Index (27°C)	-	ASTM-D-1045-86	1.440-1.446.

#### Total Solution in Plasticizers



## BUTYL CITRATE (TBC)

### Properties

TBC is almost colourless and odourless oily liquid, free of foreign materials which is soluble in water but soluble in alcohols and organic solvents and is miscible and compatible with all the monomeric plasticizers of PVC compounding.

### Application

1. Main plasticizer of polyvinyl chloride for food packing and medical products.
2. Main plasticizer of vinyl chloride-vinylidene chloride copolymer for food-packing and precise instrument packing.
3. Plasticizer of vinyl chloride-vinyl acetate copolymer.
4. Plasticizer of sustained-release pharmaceutical tablets.
5. Plasticizer of latex adhesives.
6. Lubricating oil for surface treatment of tinplate.
7. In manufacturing of toys and safety glasses.

### Packing & Storage

TBC is packed in 200/225 kg iron drum / HDPE drum, 20 - 22 MT in Flexi tank / ISO tank / road tanker. It is stored in tightly closed container, in a cool, dry, ventilated area.

### Shelf Life

Original characteristics minimum for 24 months, if kept in recommended storage.

### Safety

The MSDS can be provided on request.

### Disclaimer

The data contained in this publication are based on our current knowledge and experience. During processing, there are so many factors which may affect the application part of TBC, so these data neither imply any guarantee of certain properties, nor the suitability of the product for the specific purpose. Any data given in this publication may change without prior information and do not constitute the agreed quality of our product.

Total Solution in Plasticizers