



ELFAT – TRA™ (Triacetin)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	Clear, colorless, oily liquid, free from suspended matter.
Physical Form	Clear, colorless, oily liquid, free from suspended matter.
Odor	Smellless
Molecular Weight	218.21
Density	1.16 g/cm ³
Specific Gravity (20°C)	1.154-1.164 g/ml
Specific Gravity (25°C)	1.154-1.158 g/ml
Viscosity (20°C)	23 mPa.s
Viscosity (25°C)	approx. 17 mPa.s
Refractive Index (20°C)	1.430-1.435
Refractive Index (25°C)	1.429-1.431
pH (50 g/L aqueous solution, 20°C)	5.0-6.0
Assay / Purity	≥99.5%
Chemical Properties	
Ionic Nature	Non-ionic
Incompatibilities	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂).
Thermal Properties	
Melting Point	3 °C
Boiling Point	258 °C
Flash Point	138 °C (closed cup)
Autoignition Temperature	433 °C
Thermal Stability	Stable under recommended storage conditions.
Solubility	

Property	Specification
Solubility in Water (20°C)	64.0 g/L
Solubility in Water (25°C)	5.9 g/100ml
Solubility in Ethanol	Miscible
Solubility in Methanol	Soluble
Solubility in Acetone	Very soluble
Solubility in Diethyl Ether	Miscible
Solubility in Chloroform	Miscible
Solubility in Benzene	Miscible

2. Processing Methods

Aqueous Tablet Film Coating

This formulation describes a typical aqueous-based film coating for pharmaceutical tablets, where triacetin acts as a hydrophilic plasticizer to improve the flexibility and durability of the polymer film.

Key Ingredients	Indicative Dosage (% w/w)
Hydroxypropyl Methylcellulose (HPMC)	Base Polymer
Triacetin	10-35%
Water	q.s. to desired solids content

Flavor Microemulsion

This formulation creates a stable microemulsion for flavor delivery, leveraging triacetin as the oil phase.

Key Ingredients	Indicative Dosage (% w/w)
Triacetin (Oil Phase)	25%
Polysorbate 20 (Surfactant)	25%
Polyoxyl 35 Castor Oil (Cosurfactant)	25%
Water	50%

3. Dosing by Application

Application	Recommended / Max Dosage
Pharmaceutical Tablet & Capsule Coatings	10-35% w/w of the polymer content
Flavoring Agent / Solvent	Governed by Good Manufacturing Practices (GMP)
Chewing Gum (as Plasticizer)	Governed by Good Manufacturing Practices (GMP)



Application	Recommended / Max Dosage
Baked Goods (as Humectant)	Governed by Good Manufacturing Practices (GMP)
Beverages (Non-alcoholic)	Governed by Good Manufacturing Practices (GMP)
Confections and Frostings	Governed by Good Manufacturing Practices (GMP)
Hard Candy	Governed by Good Manufacturing Practices (GMP)
Frozen Dairy Desserts	Governed by Good Manufacturing Practices (GMP)

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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