



TECHNICAL DATA SHEET

F-500 ENCAPSULATOR AGENT

Date Prepared: May 1, 2024

PRODUCT IDENTITY

Product Name:	F-500 Encapsulator Agent
D.O.T.:	Not Regulated
Formula:	Proprietary
Chemical Family:	Surfactant
Class Fires:	Class A, B, D, K, F, Lithium-ion Battery
Proportioning Rate:	¼%, ½%, 1%, 3%, or 6% by volume

PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point:	250°F	Melting Point:	N/A
Specific Gravity:	0.990+/- .01	Vapor Pressure (mm/Hg):	N/A
Surface Tension (dyne/cm ²):	<29.0 @ 3%	Vapor Density (Air=1):	N/A
Percent Volatile by Volume:	N/A 100% Concentrate	Viscosity at 72°F:	85 cP @ 72°F
Flammable Limit:	N/A	Solubility in Water:	Complete
Reactivity with Water	No	Flash Point:	N/A
Auto-Ignite Temperature:	N/A	Freeze Temperature:	<20°F
Evaporation Rate:	<1 compared to water	Storage:	35°F - 130°F
Appearance:	Amber	Freeze Harm:	None
Odor:	Mild	Shelf Life (unopened):	15 years
Fire Extinguisher Media:	N/A	pH:	7.0 +/- 0.1

ENVIRONMENTAL DATA

Corrosivity (Steel Coupons):	7.0 micrometers/year (fresh water=8 micrometers/year)
BOD ₅ (3% Solution):	12,000 mg/l at 3%
COD (3% Solution):	58,000 mg/l at 3%
Biodegradability (BOD ₅ /COD Ratio):	0.20
Fluorocarbon compounds:	None-Fluorine Free
Glycol Ethers:	None
Phosphates:	None
LD ₅₀ :	>5 g/kg (See Note 1)
Reverse Mutation Assay:	Non-mutagenic (Salmonella and E. Coli standards)
EC ₅₀ Microbial Toxicity:	3,000 mg/l
LC ₅₀ (Rainbow Trout):	1.20 mg/l
Smoke Toxicity Reduction (toluene fire):	>98% reduction in toxins emitted into the air.

APPROVALS

NFPA 18 – Wetting Agent

NFPA 18A – Water Additive for Fire Control and Vapor Mitigation, Section 7.7 – Encapsulator Agent

ISO (Insurance Services Office) rates F-500 EA as comparable to foam for community risk assessment.

Note 1: The LD₅₀ for F-500 EA exceeds the minimum requirements by the US Food and Drug Administration for inclusion in food items to be consumed by humans, which is not the intended use.