

SORBITAN MONOLAURATE (SPAN 20)

E493 Yeast Protectant & Emulsifier

OVERVIEW

Chemical Nature: Non-ionic surfactant derived from sorbitan and lauric acid.

Appearance: Viscous amber liquid. (HLB Value: 8.6)

Primary Function: Industry-Standard Yeast Protectant. Preserves cell viability for Instant Dry Yeast during drying and acts as a rehydration aid.

SPECIFICATIONS

Sorbitan monolaurate typically appears as a viscous or waxy substance with moderate water dispersibility. Its hydrophilic-lipophilic balance (HLB) makes it suitable for stabilizing emulsions.

Test Item	Unit	Min	Max
HLB Value	-	8.6	
Saponification Value	mg KOH/g	155	170
Hydroxyl Value	mg KOH/g	330	360
Acid Value	mg KOH/g	-	7
Moisture	%	-	1.5
Fatty Acid Content	w%	56	68
Polyol Content	w%	36	49
Ash Residue	w%	-	0.5
Sulfur (S)	mg/kg	-	3
Lead (Pb)	mg/kg	-	2

MOLECULAR STRUCTURE & MECHANISM

- Hydrophilic Backbone:** Sorbitan (derived from sorbitol dehydration).
- Hydrophobic Moiety:** Lauric acid (C12 fatty acid).

- **Amphiphilic Nature:** Aligns at oil-water interfaces, effectively reducing surface tension and stabilizing emulsions.

APPLICATIONS

- **Dry Yeast Manufacturing:** Added to yeast prior to drying to protect cell membranes and facilitate rapid rehydration.
- **Cosmetics & Skincare:** A low-HLB co-emulsifier for lightweight lotions. Improves spreadability without a greasy feel.
- **Food Processing:** Functions as an antifoaming agent in sugar processing and milk production.
- **Industrial Lubricants:** Rust inhibitor and lubricant additive in metalworking fluids.
- **Co-Emulsifier System:** Often paired with Polysorbate 20 (Tween 20) to create highly stable, fine-textured emulsions.

STORAGE & PACKAGING

Storage: Store in a cool, dry, well-ventilated area away from sunlight and heat. Keep container tightly sealed.

Shelf Life: 24 months in original unopened packaging under recommended storage conditions.

Package Options:

- 25 Kg / drum
- 200 Kg / drum
- 1000 Kg IBC tote