



SUPER SAP® ONE Epoxy Resin

Bio-based epoxy system for laminations, coatings and marine applications

Technical Data Sheet

SUPER SAP® ONE Epoxy – High bio-content epoxy resin for general laminations and coatings

Product Overview

SUPER SAP® ONE Epoxy Resin is our leading high-bio ambient cure laminating resin. Designed to achieve a delicate balance of high-performance and bio-content while improving on user-safety at an affordable price. Super Sap® ONE features our unique blend of quick air-releasing properties as well as our proprietary UV resistance package.

Hardener Speeds

Super Sap® ONF (FAST) Hardener – Premium low blush, versatile coating and composite hardener.

Applications

SUPER SAP® ONE System works well with for all general purpose coating and lamination applications. It has an ideal viscosity for a wide range of applications that use hand layup techniques with fast room temperature cures.

WHY CHOOSE SUPER SAP

Performance Grade:

- Improved mechanical performance
- Formulas catering a wide range of processes and applications

Reduced Environmental Impact:

- 50% minimum reduction in CO and greenhouse gas emissions¹
- Green chemistry eliminates harmful by-products
- Reduced power and water consumption
- USDA Certified for Bio-Content

¹ As compared to 100% petroleum derived epoxies, depends on final system bio-content, LCA measurement using ISO 14040:2006.

Product Combo (Epoxy/Hardener)		ONE / ONF
Key Features		High bio-content, USDA BioPreferred Certified, High elongation, Slight amber color
Applications		General laminating, adhesive, coating system, Hand layup, Vacuum molding
Potential Use		Woodworking, Wood laminates, Marine, Surfboards
Performance Data ²		
Tensile Modulus (psi) ³		385,000
Tensile Strength (psi) ²		7,720
Elongation (%) ²		6
Flexural Modulus (psi) ⁴		362,000
Flexural Strength (psi) ³		11,910
Compression Strength (psi) ⁵		11,300
Midpoint Tg by DSC (°F) ⁵		144°F / 62°C
Hardness (Shore D) ⁶		70-80
Biobased Carbon Content ⁷		31
Processing Data		
Mix Ratio (by volume)		2:1
Mix Ratio (by weight)		100:43
Mixed Specific Density (@ 77°F / 25°C)		1.10
Viscosity (A/B/Mixed, cPs, @ 77°F / 25°C)		650/250/500
Pot Life (mins, @ 77°F / 25°C)		15-20
Tack Free Time (hrs, @ 77°F / 25°C)		3
Recommended Full Cure (days, @ 77°F / 25°C)		7

² All performance data was taken from neat resin samples that underwent an initial cure at room temperatures for 24 hrs and a post cure at 120°F for 2 hrs

³ ASTM D638

⁴ ASTM D790

⁵ ASTM D695

⁶ ASTM D2240

⁷ ASTM D6866

Recommended Cure Cycles

Cure characteristics for room temperature cures will depend greatly on the ambient conditions of your working area, namely temperature and humidity. To achieve optimal mechanical characteristics all room temperature cure systems should be allowed the recommend cure cycle before being placed into service. We recommend building sample coupons using proposed materials and processes to fully understand curing characteristics of the resins in your working environment.

All Ambient cure hardener systems will cure to a brittle B stage in the allotted tack free time. To achieve full cure we recommend an elevated temperature post cure of 100°F – 180°F to reach optimal mechanical properties.

Safety and Handling

Please refer to the SDS for the most up to date Safety and Handling information. SDS downloads are available on the web at <http://www.entropyresins.com/products>.

Despite their natural derivation, exposure to these materials represents hazards typical to all epoxy resins. Exposure should be minimized and avoided through the use of proper protective clothing and equipment and appropriate manufacturing controls. All persons who use, store, or transport these materials should properly understand the handling precautions and recommendations as stated in the SDS.

Shelf life should be no less than 24 months when stored in closed containers, in a dry place, out of direct sunlight, and at stable temperatures between 60 - 95°F.

Sales Packages

	IBC	Drum	Pail	Gallon
Epoxy Resin	2200 lbs	440 lbs	45 lbs	9.0 lbs
Hardener	-	424 lbs	40 lbs	8.0 lbs

Weights are approximates and will vary depending upon product and mix ratio

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