Technical Data Sheet
SUPER SAP® 100/1000 System – High Bio-Content, General Purpose Liquid Epoxy Resin

Product Overview

SUPER SAP® 100/1000 SYSTEM is composed of Super Sap® 100 Epoxy, a modified, liquid epoxy resin, with Super Sap® 1000 Hardener. As opposed to traditional epoxies that are composed primarily of petroleum-based materials, Super Sap® formulations contain bio-renewable materials sourced as co-products or from waste streams of other industrial processes, such as wood pulp and bio-fuels production. These natural components have excellent elongation and exceptionally high adhesion properties.

Applications

SUPER SAP® 100/1000 SYTEM is our most versatile epoxy system, delivering high bio-content, fast room temperature cures, and low sensitizing ingredients for increased user safety. Its medium viscosity and great adhesion to all substrates make it an excellent composite laminating resin, coating, or adhesive.

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 emissions[1]
- Green chemistry eliminates harmful by-products
- Reduced power and water consumption

Considerations for the Environment & User Safety:

- Agricultural land use
- Reduced harmful by-products such as chlorinated hydrocarbons
- Reduced power and water consumption during processing
- Lowered sensitizing components for increased user safety

SUSTAINABLE TECHNOLOGY

Industrial Pine Oils

Sourced as a co-product from the paper pulp industry, our pine-based feedstocks are an economic alternative to traditional petrochemicals and provide unique mechanical properties in our resins, such as improved adhesion and elasticity. Our patent pending Super Sap® technology is the secret to unlocking these properties.

Waste and Non-Food Grade Vegetable Oils

By-products of bio-fuels production provide a green chemistry route to one of the main components in our epoxy production. This renewable feedstock replaces additional petrochemical components in our resins with a rapidly renewable resource.

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

Product Combo (Epoxy/Hardener)		100/1000
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]		380,000
Tensile Strength (psi)[2]		8,200
Elongation (%)[2]		7
Flexural Modulus (psi)[4]		330,000
Flexural Strength (psi)[3]		11,170
Compression Strength (psi)[5]		10,460
Onset Tg by DSC (°F)[6]		116
Ultimate Tg by DSC (°F)[5]		186
HDT (°F)[7]		149
Hardness (Shore D)[8]		70-80
Biobased Carbon Content[9]		37
Processing Data		
Mix Ratio (by volume)		2:1
Mix Ratio (by weight)		100:48
Mixed Specific Density (@ 77°F)		1.09
Viscosity (A/B/Mixed, cPs, @ 77°F)		650/450/600
Pot Life (mins, @ 77°F)		25
Tack Free Time (hrs, @ 77°F)		4
Recommended Full Cure		7 days @ 77F

[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 D3418
[7] ASTM D648
[8] ASTM D2240
[9] 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.

Safety and Handling

Please refer to the MSDS for the most up to date Safety and Handling information. MSDS downlaods 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 MSDS.

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	-	420 lbs	42 lbs	8.75 lbs
Weights are approximates and will vary depending upon product and mix ratio				

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