



CORVE8121

Thixotropic Vinyl Ester Resin

Technical Data Sheet

CORVE8121 is a promoted, thixotropic, vinyl ester resin used in spray-up and hand lay-up applications. It is specifically formulated for the boat, pool, and spa manufacturing industries, and may also be used in other applications that require high physical properties and excellent fatigue performance.

FEATURES	BENEFITS
• Moderate Laminate Exotherm	• Good cosmetic surface and minimal glass print
• Fast Trim Time	• Shorter cycle time and fast Barcol development
• Good Fiberglass Wet-Out	• Easy roll-out and high laminate physical properties
• Promoted for Ease of Application	• Good gelation properties with low foaming quality
• Excellent Fatigue Performance ¹	• Long service life for composites under loading
• Low Water Absorption and Excellent Blister Resistance ²	• Eliminates need for repairing blisters in composites immersed in water
• Retention of Physical Properties After Immersion in Water for 15 Years ³	• Minimal to zero loss of physical properties after long term exposure to water

RELATED PRODUCTS	GEL TIME	MEKP Level, % by weight
CORVE8115	10-15 Minutes	1.2
CORVE8117	15-20 Minutes	1.2
CORVE8119	20-25 Minutes	1.2
CORVE8121M (odor-masking agent)	25-30 Minutes	1.2
CORVE8123	32-37 Minutes	1.2
CORVE8129	35-45 Minutes	1.4

LIQUID PROPERTIES	RESULTS
Viscosity, Brookfield Model LV #3 Spindle @ 60 rpm, 77°F (25°C), cps	475-675
Thixotropic Index	2.5-3.2
100 grams resin @ 77°F (25°C), initiated with 1.2% Hi-Point 90 by volume * Gel Time, min:sec Gel to Peak Exotherm Time, min:sec Peak Exotherm	25:00-30:00 10:00-20:00 320-380°F (160-193°C)
Non-Volatile Content, %	51.0-56.0
Specific Gravity	1.00-1.03

TYPICAL PROPERTIES	1/8 inch (3.2 mm) Casting		1/8 inch (3.2 mm) Laminate	
Thickness Construction	Not Applicable		4 Plies 1.5 oz/ft ² , 33% Glass Mat	
Flexural Strength, ASTM D790	19,000 psi	131 MPa	32,600 psi	225 MPa
Flexural Modulus, ASTM D790	4.7 x 10 ⁵ psi	3,240 MPa	11.0 x 10 ⁵ psi	7,586 MPa
Tensile Strength, ASTM D638	11,800 psi	81 MPa	16,300 psi	112 MPa
Tensile Modulus, ASTM D638	4.0 x 10 ⁵ psi	2,760 MPa	11.0 x 10 ⁵ psi	7,586 MPa
Tensile Elongation, ASTM D638	4.5 %	4.5 %	2.0 %	2.0 %
Barcol Hardness, 934-1 gauge, ASTM D2583	34	34	47	47
Heat Distortion Temperature, ASTM D648	210 °F	99 °C	--	--

* The gel time and reactivity will vary due to the type and concentration of Free Radical Initiator (catalyst), shop temperature, humidity, and type of fillers used. In order to meet your individual needs consult our technical sales representative for assistance. If using methyl ethyl ketone peroxide (MEKP) to gel and cure CoREZYN® vinyl esters, we recommend only these four brands: Cadox® L-50a (Akzo Nobel); Luperox® DHD-9 (Arkema); Hi-Point® 90 (Pergan); or Norox® MEKP-925 (United Initiators). These must be used at the appropriate percentage and suitable temperature. Contact your Interplastic Corporation representative for assistance.

1. Cycle Test Evaluation of Various Polyester Types and a Mathematical Model for Projecting Flexural Fatigue Endurance
2. A 15-Year Study of the Effective Use of Permeation Barriers in Marine Composites
3. Physical Properties Evaluation of FRP Composites after 15-Year Immersion in Water

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