FORMULATED RESINS

CONAPOXY® FR-1210

DESCRIPTION

CONAPOXY® FR-1210 is a filled epoxy potting casting resin. When cured with any of the hardeners listed below, systems exhibiting low shrinkage, low coefficient of expansion, good resistance to mechanical and thermal shock, and good electrical properties are obtained. Hardness of these systems ranges from 80 to 90 Shore D.

CONACURE® EA-02 Hardener	Low viscosity; rigid castings
CONACURE® EA-028 Hardener	Low viscosity; limited flexibility. Will cure in thin films at room temperature. Very good thermal resistance.
CONACURE® EA-87 Hardener	Low viscosity; limited flexibility. Requires heat to cure in thin films. Less expensive than EA-028.

CHARACTERISTICS AND PROPERTIES

Table 1 | Product Description.

Property	CONAPOXY® FR-1210	CONACURE® EA-02 Hardener	CONACURE® EA-028 Hardener	CONACURE® EA-87 Hardener
Color	Tan	Clear Amber	Clear Amber	Light Amber
Specific Gravity @ 25°C (77°F)	1.66	0.98	1.00	0.96
Viscosity @ 25ºC (77ºF), cps	95000	55	40	55

Table 2 | Typical Cured Physical Properties

CONAPOXY® FR-1210 Cured with:	CONACURE® EA-02 Hardener	CONACURE® EA-028 Hardener	CONACURE® EA-87 Hardener
Hardness, Shore D	85	80	90
Tensile Strength, psi	8000	6500	8050
Compressive Strength, psi	16000	12000	14000
Flexural Strength, psi	13000	7000	9000
Linear Shrinkage, %	0.6	0.9	0.4
Glass Transition Temperature, ºC	85-90	70-75	85-90
Coefficient of Thermal Expansion, in./in./ºC	45-50 x 10^{-6}	45-50 x 10^{-6}	45-50 x 10^{-6}
Thermal Conductivity (cal/sec/cm^2/ºC/cm)	7-10	7-10	7-10

Table 3 | Typical Cured Electrical Properties

CONAPOXY® FR-1210 Cured with:	CONACURE® EA-02 Hardener	CONACURE® EA-028 Hardener	CONACURE® EA-87 Hardener
Dielectric Strength, vpm	375	375	375
Dielectric Constant @ 1 KHz, @ 25 ºC (77ºF)	4.3	4.9	4.2
Dissipation Factor @ 1 KHz, @ 25 ºC (77ºF)	0.003	0.006	0.035
Volume Resistivity, ohm-cm @ 25 ºC (77ºF)	3.0 x 10^{14}	3.0 x 10^{13}	4.2 x 10^{15}
Surface Resistivity, ohms @ 25 ºC (77ºF)	9.2 x 10^{15}	2.5 x 10^{15}	6.8 x 10^{15}

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Table 4 | Typical Processing Parameters

CONAPOXY® FR-1210 Cured with:	CONACURE® EA-02 Hardener	CONACURE® EA-028 Hardener	CONACURE® EA-87 Hardener
Mix Ratio by Weight, Resin/Curative (Part A/Part B)	100/5.5	100/14	100/18.5
Mix Viscosity @ 25 ºC (77ºF), cps	10000	9000	4500
Specific Gravity @ 25 ºC (77ºF)	1.58	1.54	1.50
Gel Time @ 25 ºC (77ºF), minutes	30	40	60
Cure Schedule @ 25 ºC (77ºF), hours	24	24	24
Alternate Cure @ 60 ºC (140ºF), hours	2	2	2

HANDLING AND STORAGE INSTRUCTIONS

Maintain containers at temperatures of 20°– 30ºC (68º–86ºF) and keep securely closed when not in use. CONAPOXY FR-1210 and curatives have a shelf life of 18 months from date of manufacture when stored in the original unopened containers at 20º–30ºC (68–86ºF). Settling of fillers may occur in the resin. Please mix before use. Use only in well-ventilated areas. Adequate ventilation should be provided during and immediately after application. Avoid breathing of vapors or spray. Prevent skin contact. If contact occurs, wash with soap and water. Material is flammable. Do not use in presence of open flames or sparks.

For more detailed safety data, please request Material Safety Data Sheets from Cytec Industries Inc.

AVAILABILITY

CONAPOXY FR-1210 are available in gallon, 5-gallon, and 55-gallon containers.
CONACURE curatives are available in gallon and 5-gallon containers.

CAUTION: Responsible handling of Cytec Industries Inc. products requires a thorough review of safety, health, and environmental issues prior to use. Review the Material Safety Data Sheets(s) for the specific Cytec Industries Inc. product(s) and container label information before opening containers. Ensure that employee exposure issues are understood, communicated to all workers, and controls are in place to prevent exposures above Permissible Exposure Limits (PELs). Review safety and environmental issues to be certain controls are in place to prevent injury.

CONTACT INFORMATION

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