

Technical Data Sheet

Electrical Insulation Materials

**ELAN-Cast[®] E 210 DP Green Resin
ELAN-Cast[®] C 383 Hardener**

Two-Component Epoxy Potting Compound / Sealer

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ELAN-Cast[®] E 210 DP Green / C 383

Product Description

ELAN-Cast[®] E 210 DP Green / C 383 is a filled, room temperature cured, two-component epoxy system.

Areas of Application

Potting, encapsulation and sealing of transformers and AC stators up to 10 HP

Features and Benefits

- Room temperature or low heat cure
- Chemical and moisture resistant
- Pours readily at room temperature
- Tough, semi-rigid
- Excellent end-turn sealant
- Resistant to thermal shock
- Suitable for service up to Class 155

Application Methods

- Atmospheric potting / casting
- Vacuum potting / casting
- Brush-on

Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for twelve (12) months from the date of shipment.

Failure to store this product as recommended above may lead to deterioration in product performance.

Mix individual components thoroughly before use

Health and Safety

Read and observe precautions recommended in the Safety Data Sheet.

See ELANTAS PDG Technical Bulletins *TI-100 - Handling Precautions for Epoxy Resins* and *TI-4005 - Epoxy Reaction Potential Hazards* for additional information.

Typical Properties of Material as Supplied

Property	Conditions	Value		Units
		ELAN-Cast [®] E 210 DP Green Resin	ELAN-Cast [®] C 383 Hardener	
Viscosity	25°C / 77°F	4,000 - 10,000	5 - 20	cP
Weight per Gallon	25°C / 77°F	11.2 - 11.6	8.2 – 8.5	pounds
Flash Point	ASTM D93	> 94 > 201	> 94 > 201	°C °F
Mix Ratio	Parts by weight Parts by Volume	100 100	17 23	

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Regulatory Information

Property	Test Method	Value	Units
Volatile Organic Content	ASTM D6053	< 0.1 ^[1]	pounds / gallon

^[1] VOC test methods and limits vary widely by regulatory jurisdiction and product application. The value above was obtained by curing a thin film under specific laboratory conditions.

Typical Properties of Mixed Material

Property	Conditions	Value	Units
Gel Time	200 grams – 25°C / 77°F	60 - 90	minutes
Mixed Viscosity	25°C / 77°C	600 - 1000	cP

Application / Curing Schedule

Mix ELAN-Cast[®] E 210 DP Green Resin and C 383 Hardener in the ratio specified above, hand-stirring with a spatula or similar device. Pot life is about 45 minutes. Mix only the amount of material that is needed for the job at hand.

Mixed material will harden within 2 - 4 hours at 25°C / 77°F. Full properties will develop over 5 - 7 days at room temperature.

Alternatively, once the material has hardened, a low temperature bake of 16 hours at 60°C / 140°F or 4 hours at 80°C / 176°C can be used.

The cure schedules above are based on time after the unit reaches the specified temperature and are recommendations only. The user is responsible for determining the optimum cure conditions for their application.

Typical Mechanical Properties - Specimens cured 7 days at 25°C / 77°F

Property	Test Method	Conditions	Value	Units
Tensile Strength	ASTM D638	25°C / 77°F	2900	psi
Elongation	ASTM D638	25°C / 77°F	25	%
Shore Hardness	ASTM D2240	25°C / 77°F	D 75	
Glass Transition Temp. (T _g)	ASTM E831	TMA	51	°C
Coefficient of Thermal Expansion	ASTM E831	Below T _g Above T _g	75 250	ppm / °C ppm / °C
Thermal Conductivity	ASTM C518		0.3	watts / m·K
Thermal Shock	ASTM D1674	-55°C to 130°C	pass	

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Typical Electrical Properties - Specimens cured 7 days at 25°C / 77°F

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°C – 45 mils	680	volts/mil
Dielectric Strength	ASTM D149	25°C / 77°C – 45 mils After 24 hours in water	490	volts/mil
Dielectric Constant	ASTM D150	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	5.1 7.3	
Dissipation Factor	ASTM D150	1 kHz – 25°C / 77°F 1 kHz – 100°C / 212°F	0.04 0.09	
Volume Resistivity	ASTM D257	25°C / 77°C	7.4 x 10 ¹⁴	ohm-cm

The above properties are typical values and are not intended for specification use.

ELANTAS PDG, Inc. warrants the chemical composition of its products within stated tolerances, but does not guarantee that a product will be appropriate for any particular application. Any recommendation, performance of tests or suggestion is offered merely as a guide and is not a substitute for a thorough evaluation by the user. No representative of ELANTAS PDG, Inc. has the authority to offer a warranty that a product will perform satisfactorily in manufacturing an article and no such representation should be relied upon.

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