

Technical Data Sheet

Electronic & Engineering Materials

CONATHANE® EN-2534 Black

Two-Component Polyurethane Potting Compound

ELANTAS PDG, Inc.

1405 Buffalo Street
Olean, NY 14760
USA
Tel +1 716 372-9650
Fax +1 716 372-1594
info.elantas.pdg@altana.com
www.elantas.com

5200 North Second Street
St. Louis, MO 63147
USA
Tel +1 314 621-5700
Fax +1 314 436-1030
info.elantas.pdg@altana.com
www.elantas.com

CONATHANE® EN-2534 Black

Product Description

CONATHANE® EN-2534 Black is a two-component, filled, polyurethane potting system.

Areas of Application

Potting and encapsulation of electronic components, modules, strain sensitive circuitry, transformers and coils.

Features and Benefits

- UL RTI 120
- UL94 HB
- Low stress cure for protection of sensitive components
- Excellent water resistance
- Excellent thermal shock resistance

Application Methods

- Hand-mix bench potting / casting
- Meter-mix bench potting / casting
- Meter-mix vacuum potting / casting

Transportation / Storage

Store at or 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 the product as recommended above may lead to deterioration in product performance.

This product is sensitive to moisture and atmospheric humidity. Containers, once opened, should be used immediately or blanketed with dry air or nitrogen (CONAP® Dri-Purge) before resealing.

Mix and degas individual components thoroughly, prior to use. CONATHANE® EN-2534 Part B contains filler that must be redistributed homogeneously.

Health / Safety

Refer to the Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	
		CONATHANE® EN-2534 Part A Urethane Prepolymer	CONATHANE® EN-2534 Part B Black Curative
Viscosity	25°C / 77°F	200 cP	6,000 cP
Specific Gravity	25°C / 77°F	1.24	1.44
Color		Brown	Black
Mix Ratio	Parts by weight Parts by volume	20 23	100 100
Flash Point	ASTM D93	> 94°C > 201°F	> 94°C > 201°F

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Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Viscosity (initial)	25°C / 77°F	2,200	cP
Work Life	25°C / 77°F	15	minutes

Regulatory Information

RoHS Compliance	CONATHANE® EN-2534 Part A urethane Prepolymer and CONATHANE® EN-2534 Part B Black Curative comply with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 (RoHS 2.0) as amended 31 March 2015.
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Application / Curing Schedule

Mix the CONATHANE® EN-2534 Part A and EN-2534 Part B in the ratio specified above until homogeneous. Components may be preheated up to 60°C if reduced viscosity is required. If hand-mixing, degas at >27 in. Hg vacuum before use.

Cure 7 days at 25°C / 77°F – or – 16 hours at 80°C / 176°F

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 his application.

Typical Physical Properties

Property	Test Method	Conditions	Value	Units
Color	Visual	25°C / 77°F	Black	
Shore Hardness	ASTM D2240	25°C / 77°F	D 50	
Tensile Strength	ASTM D412	25°C / 77°F	2,000	psi
Ultimate Elongation	ASTM D412	25°C / 77°F	60	%
Tear Strength	ASTM D624	25°C / 77°F	125	pli

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Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dielectric Strength	ASTM D149	25°C / 77°F	580	volts / mil
Dielectric Constant	ASTM D150	100 Hz @ 25°C / 77°F	4.4	
		1 kHz @ 25°C / 77°F	3.7	
		1MHz @ 25°C / 77°F	3.3	
		100 Hz @ 90°C / 194°F	5.6	
		1 kHz @ 90°C / 194°F	5.3	
		1MHz @ 90°C / 194°F	3.8	
Dissipation Factor	ASTM D150	100 Hz @ 25°C / 77°F	0.19	
		1 kHz @ 25°C / 77°F	0.07	
		1MHz @ 25°C / 77°F	0.03	
		100 Hz @ 90°C / 194°F	0.13	
		1 kHz @ 90°C / 194°F	0.04	
		1MHz @ 90°C / 194°F	0.01	
Arc Resistance	ASTM D495		>120	seconds
Volume Resistivity	ASTM D257	25°C / 77°F	6.1 x 10 ¹³	ohm-cm
		90°C / 194°F	1.1 x 10 ¹¹	
Surface Resistivity	ASTM D257	25°C / 77°F	5.3 x 10 ¹⁴	ohms /sq.
		90°C / 194°F	5.3 x 10 ¹²	

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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