

Technical Data Sheet

Electrical Insulation

CONATHANE® EN-5338

Formerly CONAP® EN-5338

Two-Component Polyurethane Potting Compound

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CONATHANE® EN-5338

Product Description

CONATHANE® EN-5338 is a two-component, unfilled, polyurethane system.

Areas of Application

Potting and encapsulating of electrical and electronic assemblies.

Features and Benefits

- UL94 V0 flame rating
- Cartridge-friendly 1:2 mix ratio by volume
- Low viscosity

Application Methods

- Hand-mix Bench Potting / Casting
- Cartridge-dispensed Potting / Casting
- Meter-mix Bench Potting / Casting
- Meter-mix Vacuum Potting / Casting

Transportation / Storage

Store at 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.

CONATHANE® EN-5338 Part A may crystallize upon storage or during shipment. If this has occurred, heat to 60°C, mix thoroughly, and cool to room temperature before processing.

Health / Safety

Refer to the Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	
		CONATHANE® EN-5338 Part A Urethane Prepolymer	CONATHANE® EN-5338 Part B Curative
Viscosity	25°C / 77°F	6,000 cP	140 cP
Specific Gravity	25°C / 77°F	1.14	1.11
Appearance		Amber	Light Amber or Black
Mix Ratio	Parts by weight Parts by volume	51 50	100 100
Flashpoint	ASTM D93	> 94°C > 201°F	> 94C > 201°F

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Typical Properties of Mixed Materials

Property	Conditions	Value	Units
Viscosity (initial)	25°C / 77°F	400	cP
Work Life	25°C / 77°F	15 - 20	minutes

Regulatory Information

RoHS Compliance	CONATHANE® EN-5338 Part A Urethane Prepolymer and CONATHANE® EN-5338 Part B 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

Combine EN-5338 Part A and EN-5338 Part B in the ratio specified. The two components should be mixed thoroughly in metal or glass containers using metal or glass stirrers. Degassing of the mixed system should be accomplished at room temperature at >27 in. Hg vacuum. Containers should be large enough to allow for frothing during the degassing process.

Cure 7 – 10 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	Light Amber or Black	
Shore Hardness	ASTM D2240	25°C / 77°F	A 40	
Tensile Strength	ASTM D412	25°C / 77°F	220	psi
Ultimate Elongation	ASTM D412	25°C / 77°F	160	%
Tear Strength	ASTM D624	25°C / 77°F	40	pli
Flammability	UL94	3.0 mm	V0	

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Typical Electrical Properties

Property	Test Method	Conditions	Value	Units
Dielectric Constant	ASTM D150	100 Hz @ 25°C / 77°F	8.7	
		1 kHz @ 25°C / 77°F	8.2	
		1 MHz @ 25°C / 77°F	4.6	
Dissipation Factor	ASTM D150	100 Hz @ 25°C / 77°F	0.08	
		1 kHz @ 25°C / 77°F	0.07	
		1 MHz @ 25°C / 77°F	0.12	
Volume Resistivity	ASTM D257	25°C / 77°F	3.9 x 10 ¹¹	ohm-cm
Surface Resistivity	ASTM D257	25°C / 77°F	1.0 x 10 ¹³	ohm

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

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