

Technical Data Sheet

Electronic & Engineering Materials

CONAP[®] CE-2280

Formerly CONAP[®] DP-31369

One-Component Polyurethane Conformal Coating

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



CONAP[®] CE-2280

Product Description

CONAP[®] CE-2280 is a single component, transparent, fast curing polyurethane conformal coating designed to be toluene free.

Areas of Application

CONAP[®] CE-2280 provides an electrical and moisture barrier for thin film applications on components and printed circuit boards.

Features and Benefits

- Designed for Toluene Free Applications
- Rapid Curing at Ambient Temperature
- Excellent Hydrolytic Stability
- UL94 V-0
- Flexible Coating
- UV Tracer Dye to Aid Inspection under UV Lighting

Application Methods

- Spray Coating
- Dip Coating
- Brush Applied

Transportation / Storage

Store at 20 – 30°C / 68 – 85°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.

Health / Safety

Refer to the Safety Data Sheet.

Typical Properties of Material as Supplied

Property	Conditions	Value	Units
Viscosity	25°C / 77°F	<500	cP
Specific Gravity	25°C / 77°F	0.92	
Color		Light Amber	
Solids Content	135°C for 45 min	41 – 45	%
Flash Point	Closed Cup	>41 >105	°C °F



CONAP® CE-2280

Regulatory Information

Property	Test Method	Value	Units
Volatile Organic Content	ASTM D6053	4.5	pounds/gallon
RoHS Compliance	CONAP® CE-2280 Polyurethane Conformal Coating complies 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.		

Application / Curing Schedule

Performance of the CE-2280 cured film is dependent on process controls used in application of the coating. Cleanliness of the substrate is a major factor in promoting adhesion and preventing under-film corrosion. Assemblies must be clean, oil-free, and dry. For specific recommendations, please request the C-115 Technical Bulletin.

CE-2280 can be applied by spraying, dipping, or brushing. If viscosity reduction is desired, dilutions of 10 – 20% by weight with COANP® S-280 solvent are recommended for most applications. For some spray applications, dilutions up to 1:1 by volume may be required to avoid cobwebbing.

A minimum of two coats of CE-2280 are recommended for optimal protection. A total cured film thickness of 2 ± 1 mils is recommended. CE-2280 may be recoated after the previous film is tack free.

Curing of the film is dependent upon the evaporation of the solvents. The coating will typically dry tack-free in 15 - 20 minutes at 25°C / 77°F or 10 minutes at 60°C or 140°F. Coating will fully cure in 24 hours at 25°C / 77°F or 45 minutes at 60°C or 140°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 Electrical Properties

Property	Test Method	Conditions	Value	Units
Insulation Resistance	Mil-I-46058C	2 mil @ 25°C / 50% RH	< 1.5 x 10 ¹⁶	ohms
		After 10 days @ 65°C	2.5 x 10 ¹²	Ohms
		After 24hr s @ 25°C / 50% RH	1.0 x 10 ¹⁶	Ohms
Dielectric Strength	ATSM D-149	25°C / 77°F	3000 min	Volt/mil
Dielectric Withstanding Voltage	Mil-I-46058C	1,500 VAC	No Flashover or Breakdown	
Dielectric Constant	ASTM D-150	100 Hz @ 25°C / 77°F	2.5 – 3.0	
Dissipation Factor	ASTM D-150	100 Hz @ 25°C / 77°F	0.01	
Volume Resistivity	ASTM D-257	25°C / 77°F	2.0 x 10 ¹⁵	ohm-cm

CONAP[®] CE-2280

Typical Physical Properties

Property	Test Method	Conditions	Value
Color	Visual	25°C / 77°F	Translucent Amber
Hardness	ASTM D-2240	25°C / 77°F	30 – 35 Shore A
Flammability	UL-94	3.15 mil	V-0
Solvent Resistance			Good
Hydrolytic Stability	Mil-I-46058C	120 days @ 85°C / 95% RH	No discoloration or degradation
Flexibility	Mil-I-46058C	1/8" diameter mandrel	No cracking or crazing
Thermal Shock	Mil-I-46058C	-30°C / -22°F to 125°C / 257°F	No cracking or deformation
Flame Resistance	FED STD-406		Self-Extinguishing
Fungus Resistance	ASTM G-21		Non-Nutrient
Solderability			Excellent
Inspection		UV Light	Fluorescent

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 a product and no such representation should be relied upon.

The user may forward, distribute, and/or photocopy this document only if unaltered and complete, and should refrain from any unauthorized use. This document may not be copied to a website without specific authorization from ELANTAS PDG, Inc.