

Product Information **DOLPHON® CC-1105**



E317427

Solventless unsaturated polyester, Low viscosity, Freon resistance

Thermal class 200 (C)

VPI / Trickling / Rolling / Dip & Bake



ELANTAS Zhuhai Co LTD.

No.5, Langyu Road, Nanshui
Town, Jinwan District,
Zhuhai
Guangdong
P.R. China
519050

Tel: +86 756 771 0411
Fax: +86 756 771 0416

www.elantas.com

Product description

DOLPHON® CC-1105 is a one package, 100% solids polyester resin especially developed for both under vacuum impregnations and dip-and-bake applications.

Advantage of product

- UL approved (file OBOR2.E317427 and OBJS2.E317429)
- Precatalyzed. Excellent tank stability: more than 1 year at 25°C
- High flash point (over 165°C): reduces fire hazards
- Low vapor pressure, excellent for vacuum processing
- Low viscosity, excellent penetration into windings
- Superior bond strength at high temperatures
- Superior chemical and moisture resistance
- Freon-resistant: recommended for hermetic motors

Application area

DOLPHON® CC-1105 is a versatile product that can be used in dip and bake, vacuum, VPI, roll thru and trickle applications. It's versatility allows it to be used in a wide variety of applications such as:

- Transformers
- Rotors
- High speed armatures
- Stators
- Hemetic motors
- Traction coils.

Processing methods

DOLPHON CC-1105 is suitable for applications under vacuum or at atmospheric pressure.

For V.P.I. applications the following cycle is suggested

- Preheat unit over 105°C
- Cool to 40-50°C
- Place the unit in the vacuum chamber
- Transfer the resin to the chamber and impregnate under vacuum for 30 minutes
- Release vacuum and apply a pressure of 3 -8 atm.
- Release the pressure and let the unit drain for minimum 30 minutes
- Bake for the recommended time

Baking cycle

The time required will depend on the size and weight of the units.

The following baking times are recommended, according to the requirement of the individual applications:

15 - 30 min. at 175°C	30 - 45 at 165°C
60 - 90 min at 150°C	2 - 3 h. at 135°C
4 - 6 h. at 120°C	10 - 14 h. at 110°C

(time must be taken after units reach the curing temperature)

To obtain a higher coating on the units we suggest to put them into the oven already heated at the selected baking temperature.

DOLPHON CC-1105 is supplied precatalyzed.

DOLPHON CC-1105 reacts with bare copper and copper alloys. In such case the anti-greening additive 551/D can be added in order to prevent this phenomenon.

DOLPHON CC-1105 reacts with natural rubbers; it is therefore not advisable using these materials in the impregnating plant construction.

Package

20kg cans, 200 Kg drums, 1000 Kg containers

Healthy & safety

Please refer to safety data sheet (SDS) .

Storage & shelf life

12 months at maximum 30°C, in sealed containers protected from light and sun.

Properties of component as supplied

Properties	Condition	Test Method	Specification
Density	25°C	ISO 2811 EEIZ-WI/RD 05.002	1.15 - 1.25 g/ml
Viscosity	25°C	ISO 2555 EEIZ-WI/RD 05.007	400 - 700 cps
Viscosity	25°C Ford 4 cup	ISO 2431 EEIZ-WI/RD 05.004	120 - 180 s
Gel time	100°C	ISO 9396 EEIZ-WI/RD 05.011	110-140 min
Gel time	110°C	ISO 9396 EEIZ-WI/RD 05.012	25-40 min

Mechanical properties in cured condition

Properties	Condition	Test Method	Specification
Bond Strength (Heical Coil, MW35 wire, 1h@175°C)	23°C	IEC 61033 EEIZ-WI/RD 05.053	> 190N
	155°C		> 90N
	180°C		> 60N

Electrical properties

Properties	condition	Test Method	Typical Value
Dielectric strength	25°C, on 25 µm thickness dry film	ASTM D-115 EEIZ-WI/RD 05.037	> 4000 V
Dielectric Constant	25°C	ASTM D-150	3.14
Volume Resistivity	25°C	ASTM D 257 EEIZ-WI/RD 05.058	$7 \times 10^{16} \Omega \cdot \text{cm}$
	150°C		$1.4 \times 10^{13} \Omega \cdot \text{cm}$

Thermal properties

Properties	condition	Test Method	Value
Thermal conductivity	RT	ASTM D7984 EEIZ-WI/RD 05.054	0.15- 0.2 W/(m·K)
Thermal class, UL-1446	MW 16-C	Twisted Pair	220
	MW 35-C	Twisted Pair	200
	MW 16-C	Helical coil	180
	MW 35-C	Helical coil	200

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