



TECHNICAL DATA SHEET

**DOLPHON CC-1105
POLYESTER RESIN**

DESCRIPTION

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

Some of the outstanding features of Dolphon CC-1105 are:

- UL approved (file OBOR2.E317427 and OBJS2.E317429)
- Precatalyzed. Excellent tank stability: more than 1 year at 25°C
- High flash point (over 160°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

TYPICAL APPLICATION

Stators	High speed armatures	Transformers
Rotors	Traction coils	Hermetic motors

CHARACTERISTICS

Physical properties	
Density, @ 25°C	1200±30 g/l
Viscosity, Brookfield @ 25°C	400-700 cps
Viscosity, Ford Cup n. 4 @ 25°C	120-180"
Flash Point, Tag open cup	> 165°C
Gel-time at 100°C	110-140'
Gel-time at 110°C	25-40'
Thermal Conductivity	0,15-0,20 W /mK

Mechanical properties according to IEC61033		
	Temperature	N @ break
Method B, Bond Strength, Helical Coil (Test performed with MW 35 magnet wire - coils baked 1 h. @ 175°C)	25°C	>190
	155°C	>90
	180°C	>60

Electrical properties	
Dielectric Strength @ 25°C (on 25 µm thickness dry film), ASTM D-115	>4000 Volts
Dielectric Constant @ 25°C, ASTM D-150	3,14
Volume Resistivity @ 25°C, ASTM D-257	7x10 ¹⁶ Ω·cm
Volume Resistivity @ 150°C, ASTM D-257	1.4x10 ¹³ Ω·cm



Thermal class according to UL 1446		
Magnet Wire	Twisted Pairs	Helical Coils
MW 16-C	220°C	180°C
MW 35-C	200°C	200°C

APPLICATION GUIDELINES

DOLPHON CC-1105 is suitable for applications under vacuum or at atmospheric pressure. For V.P.I. applications the following cycle is suggested:

1. Preheat unit over 105°C
2. Cool to 40-50°C
3. Place the unit in the vacuum chamber
4. Transfer the resin to the chamber and impregnate under vacuum for 30 minutes
5. Release vacuum and apply a pressure of 3-8 atm.
6. Release the pressure and let the unit drain for minimum 30 minutes
7. 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.

STORAGE AND STABILITY

DOLPHON CC-1105 is supplied precatalyzed. The pot-life is 18 months at room temperature (max 30°C). It is recommended, therefore, not to store the CC-1105 at a temperature over 30°C.

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.

HANDLING PRECAUTION

Our products don't require particular precautions excepting for those normally taken when chemicals are used. For more details, see the SDS.

Warning: All the information and application instructions concerning this product are based on technical specifications that we consider reliable, and are provided by way of example, according to our application experience. They do not establish any guarantee but only represent a starting point subject to alterations, according to the application and the kind of material to be treated. Before using the product, the user must determine the suitability for the intended use undertake all risks and responsibility for whatever may happen in connection with the application. The producer and/or seller will not be considered responsible for any accident, loss or damage (immediate or consequent) originating from the use and/or the inability to use the concerned product. Albesiano Sisa Vernici srl reserves the right to change or modify at any time and without any notice the technical specifications of the product described in this data sheet.				
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