TECHNICAL DATA SHEET -

DOLPHON CC-1105

POLYESTER RESIN 212°C

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)
- Thermal Class 200°C.H
- UL recognized resin for the 130, 155, 180 and 220°C thermal classes. (file OBJS2.E317429)
- Precatalyzed. Excellent tank stability: more than 1 year at 25°C.
- High flash point (over 160°C): reduces fire hazards
- Low odor - 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.

Recommended uses

DOLPHON CC-1105 is recommended for all types of electrical devices such as stators, rotors, high speed armatures, traction coils, transformers, inductors and hermetic motors.

CHARACTERISTICS

Physical properties	
Specific gravity at 25°C	1180±50 gr./l.
Viscosity Brookfield Model RVT at 25°C	400-700 cps
Viscosity Ford Cup n. 4 at 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	W /mK 0,15-0,20

Mechanical properties	
Bond Strength: Helical Coil method ASTM D-2519 at 25°C	Kg. to break 19
Bond Strength: Helical Coil method ASTM D-2519 at 155°C	Kg. to break 9
Bond Strength: Helical Coil method ASTM D-2519 at 180°C	Kg. to break 6

(Test performed on Amide-Imide overcoated polyester wire - coils baked 1h. at 175°C)

Electrical properties	
Dielectric Strength, ASTM D-115	4000 Volts/ 0, 025 mm.
Dielectric Constant, ASTM D-150	3,14
Volume Resistivity, ASTM D-257, ohm/cm. at 25°C	$7x10^{16}$
Volume Resistivity, ASTM D-257, ohm/cm. at 150°C	$1,4x10^{13}$

APPLICATION

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

1. Preheat unit to 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 6-8 atm.
6. Release the pressure and let the unit drain for 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.	½ - 3/4 h. at 165°C.	1 - 1½ h. 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 in the oven already heated at the selected baking temperature.

Storage and stability

DOLPHON CC-1105 is supplied precatalyzed. The pot-life is over 18 months at room temperature (max 30°C). It is recommended, therefore, not to store the CC-1105 at a temperature over 30°C.
The stability of the product in the tank can be indefinitely extended with the regular additions of fresh resin. We suggest to send to our laboratory, every six months, a sample (300 g. minimum) of the product of the tank for a viscosity and gel-time control.
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 precautions

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