-TECHNICAL DATA SHEET-

DOLPHON XL 2101
POLYESTER RESIN

DESCRIPTION

DOLPHON XL-2101 is a two-part, hight reactive, 100% solids polyester resin specifically formulated for the roll-through or trickle processing of armatures, rotors and stators. It is one of a new class of high flash point, very low VOC, solventless polyester resins.
Here are some outstanding features of this resin:

- It does not contain neither formaldehyde nor styrene or vinyltoluene ;
- Very low weight loss on cure;
- Very low odor;
- Good bond strength;
- Excellent wetting properties;
- Fast cure cycles;
- Low viscosity;
- Good adhesion;
- UL recognized systems from 130°C to 220°C (file OBOR2.E317429)
- UL approved resin for Thermal Class H (file OBJS2.E317427)

CHARACTERISTICS

Physical properties	
Specific gravity at 25°C	1.150±50 g./l.
Viscosity Ford Cup n.4 at 25°C	40-60''
Flash Point (PMCC)	> 130°C
Gel Time at 100°C with 1% of Reactor 198/D	8-12'
Gel Time at 100°C with 2% of Reactor 198/D	6-9'
Weight loss (gr.15 of resin, from 100 to 140°C for 20')	< 3,5%

Mechanical properties	
Bond Strength: Helical Coil method ASTM D-2519 at 25°C	Kg. to break 18
Bond Strength: Helical Coil method ASTM D-2519 at 155°C	Kg. to break 3

(Test performed on MW35 magnet wire - coils baked 1 h. at 150°C)

Electrical properties	
Dielectric Strength ASTM D-115	> 3200 Volts/mm. 0,025
Volume Resistivity, ASTM D-257,50% RH, 23°C	1.4×10^{14} ohm-cm
Surface Resistivity, ASTM D-257,50% RH, 23°C	1.2×10^{14} ohm

Thermal classification according to UL1446	
NEMA – MW-16	Twisted pair 220°C
NEMA – MW-35	Twisted pair 180°C
NEMA – MW-28	Twisted pair 130°C

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APPLICATION GUIDELINE

Addition of catalyst

DOLPHON XL-2101 must be catalyzed with 1% Reactor 198/D to achieve a cure. Mix thoroughly for at least 2-3 minutes to obtain a uniform dispersion of the catalyst into the resin. The catalyzed resin has a pot life of almost 7-8 days at 20°C, afterwards the viscosity gradually increases up to gelification.

Application cycle

A) TRICKLING

1. Preheat the armatures or stators to 105-110°C (the temperature must be measured on the units)
2. Trickle the resin on the unit, keeping it in slow rotation.
3. Bake for 20-30' at 140-150°C.

B) ROLL-THROUGH

1. Preheat parts to 50-60°C (optional)
2. Roll the part in the catalyzed resin.
3. Heat rapidly to bring the rotors to 140°C to gel the resin by means of induction heating.
4. Bake for 30' at 140-150°C.

STORAGE AND STABILITY

The shelf life of uncatalyzed XL-2101 is 12 months at room temperature (max 30°C) in original closed container.
Store the resin and the Reactor in a cool place, protect from direct sunlight and keep away from heat sources.
We suggest to send to our laboratory, every six months, a sample (300 gr. Minimum) of the product of the tank for a viscosity and gel-time control.

WARNING: DOLPHON XL-2101 fears the light and is sensible to U.V. rays. When the product is not used the dipping tanks must be protected from light with covers. The exposition to the light, even for a few hours, may cause a partial gelling on the resin surface.

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 the product's use the user must determine the suitability for the intended use undertaking 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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