Resin

DOLPHON C(a)-1037/A & CN-1037/B

- **Two component hot curing potting Epoxy resin**
- **High toughness, with excellent resistance to thermal shocks**
- **Excellent thermal stability**
- **Good thermal conductivity**
- **Long pot-life at room temperature, fast cure at elevated temperatures**

Description
This is a two parts, filled epoxy system suitable for medium and high voltage applications: encapsulation and impregnation of coils, transformers, electrical and electronic components.

Application
Potting of coils, transformers, electric components, stators and rotors.

Processing guidelines
The resin and the hardener must be stirred before use, as they contain fillers which may settle during storage. Avoid air introduction during stirring.

1. Pre-heat the resin to 50-60°C and apply a 2-4 mbar vacuum for extracting the air, while slowly mixing for 1-2 h.
2. Pre-heat the hardener to 50-60°C and apply a 2-4 mbar vacuum for extracting the air, while slowly mixing for 1-2 h.
3. Pre-heat units to be potted to 80-90°C.
4. Mix the resin and the hardener.
5. In case of manual process, degas the mix under 2-4 mbar for 1-2 h. at 55-65°C while slowly mixing. This operation ensures the mixture homogeneity and improves the dielectric properties of the system.
6. Cast the mixed system under vacuum at 4-8 mbar.
7. Oven curing: 5 hrs at 80°C + minimum 6 h at 120°C
8. Slowly cool down to avoid heavy shrinkage and cracks.

Mixing ratio (resin/hardener)
Weight: 100 / 100
Volume: 100 / 94

Health and safety
Our products are intended for industrial use only. For more details, read the Safety Data Sheet.

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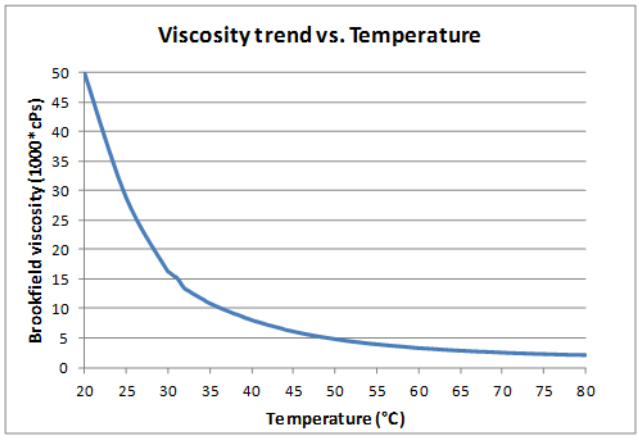
Storage conditions
Resin: 12 months in original packaging, at maximum 25°C, protected from moisture. A storage above 25°C will increase the settling. Epoxy resin may crystallize during a cold storage. In such case, warm the resin up to 60°C and remix before use.
Hardener: 12 months in original packaging, at maximum 25°C, protected from moisture. A storage above 25°C will increase the settling.
Higher temperature can be achieved during short period of time.

Physical Properties (Part A)	Test norm	Unit	Value
Color			Neutral (CN-1037/A) or brown (CW-1037/A)
Density @ 25°C	ISO 2811		1.80
Viscosity Brookfield @ 25°C	ISO 2555	mPa.s	55 000 – 85 000
Physical Properties (Part B)	**Test norm**	**Unit**	**Value**
Color			Neutral (CN-1037/B)
Density @ 25°C	ISO 2811		1.94
Viscosity Brookfield @ 25°C	ISO 2555	mPa.s	10 000 – 20 000
Physical Properties (mix)	**Test norm**	**Unit**	**Value**
Color			Neutral or Brown
Density @ 25°C	ISO 2811		1.87
Viscosity Brookfield @ 25°C	ISO 2555	mPa.s	25 000
Viscosity Brookfield @ 60°C	ISO 2555	mPa.s	4500
Gel time @ 100°C	Gelnorm	minutes	70 - 120
Gel time @ 120°C	Gelnorm	minutes	20 - 30



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After curing: Physical Properties	Test norm	Unit	Value
Hardness Shore D	ISO 868		85
Flammability	UL 94		HB (12mm)
Thermal Properties	**Test norm**	**Unit**	**Value**
Thermal Class	IEC 60085		H/180°C
Thermal Conductivity	EN 821	W/m.K	0.8
Glass transition temperature	DSC	°C	115
Mechanical Properties	**Test norm**	**Unit**	**Value**
Flexural strength	ISO 178	MPa	130
Tensile strength	ASTM D-78	MPa	80
Electrical Properties	**Test norm**	**Unit**	**Value**
Dielectric Strength @ 25°C	IEC 60243	KV/mm	22
Volume Resistivity	IEC 60093	Ω.cm	$0.7\ 10^{16}$
Surface Resistivity	IEC 60093	Ω	$8\ 10^{14}$
Dielectric Constant εr @ 25°C	ASTM D-250		4.1
Dissipation factor tg δ @ 25°C	ASTM D-250		0.009

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