Technical data sheet

Resin

DOLPHON CC-1120

- **Two component elastomeric potting system**
- **Translucent: allow identification of parts through thin layers of the resin**
- **Room temperature cure with very low exothermic reaction.**
- **Low hardness, easy removal and repair.**
- **Convenient mix ratio, easy mixing.**
- **Low viscosity for easy pouring: can be poured over sand or filler.**
- **Long pot-life: can be used with vacuum impregnation for more efficient void filling.**
- **Very low shrinkage.**
- **Excellent electrical properties (high insulation resistance, low dielectric constant and low dissipation factor) at low or elevated temperatures.**

Description
DOLPHON CC-1120 is a room temperature curing, two package translucent potting compound with low viscosity, easy to pour and highly flexible. DOLPHON CC-1120 shows virtually no compression and stress even at very low temperatures. It remains flexible at temperatures as low as –50°C. DOLPHON CC-1120 is easily removable and repairable.

Application
Filling electromagnets,potting electronic module, encapsulating circuit boards, potting transformers, magnetic hucks

Processing
Preparation of the units:

1. Some units such as transformers require impregnation with a varnish to bond and moisture proof the coil.
2. Since the insulating materials may contain a high percentage of moisture because of high humidity, units should be preheated or energized before filling with DOLPHON CC-1120. The cure of CC-1120 can be affected by moisture

Mixing:
Materials should be measured carefully to maintain the proper ratio.
Mixing ratio (resin/hardener):
Weight: 100 / 20
Volume: 100 / 20

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Pot life of mixture is approximately 70 minutes at 20°C, so material should be poured as soon as possible after mixing. Mix only enough material as can be poured in this period. Mix carefully and slowly to avoid air incorporation.

Potting:
The compound should be poured slowly.

1. Pour down one side of unit so material flows to the bottom of the container and fills from the bottom up allowing minimum of bubble formation.
2. Allow to set until well gelled.
3. If level of compound is lower than required, topping with fresh material can be done at any time

Curing:
The curing time depends on the mixed volume, the temperature and the thickness of the layer. Final properties are depending on the curing level.
Material hardens in approximately 3 hours at room temperature. Compound cures in 24–26 hours at room temperature to the consistency of hard gum. It will be firm and tack free after initial cure but may not reach ultimate hardness for several days.

Health and safety
The products are intended for professional use only. For any further information, please refer to safety data sheet.

Storage conditions
Resin and hardener: 6 months in original sealed packaging, at maximum 20°C, protected from moisture.

Physical Properties Resin	**Test norm**	**Unit**	**Value**
Colour			Opaque
Specific gravity @ 25°C		g/l	890-950
Viscosity Brookfield RVT @ 25°C		mPa.s	2000-4000
Physical Properties Hardener	**Test norm**	**Unit**	**Value**
Colour			Dark amber
Specific gravity @ 25°C		g/l	1070-1110
Viscosity Brookfield RVT @ 25°C		mPa.s	80-150
Physical Properties Mix	**Test norm**	**Unit**	**Value**
Colour			Amber opaque
Specific gravity @ 25°C		g/l	1050-1150
Viscosity Brookfield RVT @ 25°C		mPa.s	1500-2500
Gel time @ 100°C		minutes	8-12

After curing: Physical Properties	Test norm	Unit	Value
Hardness Shore A (7 days @ 25°C)			20-30
Shrinkage		%	0.2

Thermal Properties	Test norm	Unit	Value
Thermal conductivity		W/m.K	0.15-0.25
Glass Transition Temperature Tg	TMA	°C	-50
Coefficient Thermal Expansion (<Tg)	TMA	ppm/°C	92
Coefficient Thermal Expansion (>Tg)	TMA	ppm/°C	238

Electrical Properties	Test norm	Unit	Value
Dielectric strength		KV/mm	24.8
Volume resistivity		Ω.cm	$1.2\ 10^{14}$
Surface resistivity		Ω	$3.12\ 10^{13}$
Dissipation factor tg δ 60HZ	ASTM D-150		0,037

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