- TECHNICAL DATA SHEET -

DOLPHON CB 1138
TWO PART FLAME RETARDANT BLACK POLYURETHANE COMPOUND

DESCRIPTION

DOLPHON CB-1138 is a filled two part flexible polyurethane compound homologated UL 94 V0, file E 317428. It has the following outstanding properties:

- Not abrasive, suitable for use in dispensing equipment.
- Room temperature curing system.
- Low exothermic during cure.
- Very low shrinkage after cure.
- Good flexibility and adhesion.
- Good electrical properties in high humidity environment.
- Flame retardant, homologated UL 94 V0 (file n. E317428 – thickness 4 mm.)
- Suitable for operating temperatures up to 130°C.

CHARACTERISTICS

Physical Properties

	CB-1138/A	CB-1138/B	Mixed system
Colour	black	dark amber	black
Specific gravity at 25°C	1470±30 g/l	1220±30 g/l	1430±30 g/l
Viscosity Brookfield, 25°C	6000-9000 mPa.s	180-240	1500-3000
Gel time at 25°C (TECAM, 100g)			40-70’
Mixing ratio, parts by weight	100	16	
Mixing ratio, parts by volume	100	19	

Final properties, after a post curing cycle of 24h at RT + 6h at 60°C

Dielectric Constant (ASTM D-150) at 25°C.	3,29
Dissipation Factor (ASTM D-150) at 25°C.	0,061
Surface Resistivity (ASTM D-257) at 25°C, ohm	$2x10^{13}$
Volume Resistivity (ASTM D-257) at 25°C, ohm.cm	$3x10^{13}$
Dielectric strength, IEC 243, kV/cm	200-240
Elongation at break %	15-20
Tensile Strength (ISO R 527)	4-6 MPa
Thermal expansion coefficient (ASTM E228)	$50x10^{-6}x°C^{-1}$
Shrinkage after polymerization %	<0,01
Thermal conductivity	0,55-0,65 W/mK
Glass transition temperature, (DSC)	<25 °C
Shore D hardness, 25°C	35-45
Thermal Shock (Oliphant Test)	-40 /+150°C

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Recommended uses

DOLPHON CB-1138 is recommended for potting, casting and coating electrical and electronic devices and may be used as a stress relief layer where units are cast or potted in rigid compounds. A few of the many uses for this system are below mentioned:

Printed boards	Amplifiers	Junction Boxes
Sensors	Power Supplies	Coils
Relays	Ground Fault Interrupters	Motors
Ferrite Cores	Complete Electronic devices	Filters
Transformers	Connectors	Capacitors

APPLICATION AND POT LIFE

The system is easily mixed (we recommend to preheat Base A to 25-30°C) and poured by hand or dispensing machine. The mix ratio is 100 parts of resin to 16 parts of hardener by weight, or 100 parts of resin to 19 parts of hardener by volume. The pot life of the mixed system is 30-40 minutes at room temperature, measured on 100g at 25°C.

Curing

The system cures at room temperature and achieves the final properties in 8 hours at 25 °C (1).
This process can be accelerated by baking at low temperature. Do not exceed 60-65°C.

(1) The Shore D test must be performed after 7 days at 25°C or after 2H at 80°C.

Storage

Store in cool place. Protect the resin and the reactor from excessive moisture. The shelf life of CB-1138/A is 36 months at 25°C and the shelf life of CB-1138/B is 12 months at 25°C.

Handling

Avoid any contact with skin and eyes, protection with safety gloves and goggles is recommended.
For further information, see the corresponding Safety Data Sheets.

Warning: All the information and applications 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 subjects to alterations, according to the application and the kind of material to be treated. Before the product's use the utilizer 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 o 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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