

**RoHS
Compliant**

Description

The product from multicomp-Pro is a thermally conductive flame-retardant potting and encapsulating compound

It has been designed for PCB encapsulation, transformers, coils and power supplies

It has good thermal conductivity, high electrical insulating characteristics, low shrinkage, high adhesion and good chemical and water resistance.

Properties	Result	Unit
Peak Exotherm (150ml @ RT)	50	°C
Shrinkage (Volume)	0.3	%
Thermal conductivity	0.95	W/mK
Operating temperature range	-40 to +150	°C (application & geometry dependent)
Dielectric strength	18	kV/mm
Volume Resistivity	3.4×10^{12}	ohm.cm
Hardness	85	Shore D
Tensile strength	65	MPa
Compressive strength	80	MPa
Deflection Temperature	75	°C
Co-efficient of expansion	35 - 45	ppm/°C
Loss Tangent	0.045	@ 50 Hz
Permittivity	4.99	@ 50 Hz
Comparative tracking index	>850	V
Water absorption (30 days @ RT)	0.5	%
Elongation at break	1-3	%
Flexural strength	60	MPa
Glass transition temperature	60-80	°C

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Black	Clear	Black
Specific Gravity	1.80	0.93	1.64
Viscosity (mPas) @ 25°C	17500	300	3500

Mix ratio by weight 7.59:1

Mix ratio by volume 4.12:1

Cure Schedule (250g)

Temperature	Working Life	Gel Time	Light Handling	Full Cure
	(minutes)	(minutes)	(hours)	(hours)
*RT	40	190	24	168
60°C	-	-	4	6
80°C	-	-	2	4
100°C	-	-	-	-

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Epoxy Composite

multicomp PRO

*RT is defined as 20-25°C

The above are typical values and will vary depending on the cured mass and application. Hotter temperatures may be used for faster cure but will result in higher post cure shrinkage and higher cure exotherm. Experimentation and testing is suggested to avoid side effects. For maximum properties a post cure may be required – Contact our technical service department for advice.

Approvals

UL94 V-0	No
REACH (SVHC concentration)	Refer to SDS

Cleaning

All equipment contaminated with mixed material should be cleaned before the material has hardened. Use a suitable non-flammable cleaning agent.

Storage and Shelf Life

24 months at 25°C Specialty packaging may be less.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50°C) aggravate this phenomenon. Heating the individual component to 50 to 60°C while stirring can usually restore products to original state. Storage at 25°C ±10°C is optimum for most products

Some epoxy systems are prone to settling due to high filler content and should be inverted every two to three weeks to reduce the accumulation of the fillers on the bottom of the containers.

Inventory should be rotated on a FIFO (first in, first out) basis.

Health and Safety

MP000422 Health and Safety data or our Technical Service Department for individual/specific advice.

Twinpacks are pre-weighed resin and hardener components contained in a tough flexible film, separated by a removable clip and rail.

Once the clip and rail is removed the resin and hardener is thoroughly mixed within the bag and is immediately ready for use. Mixing will normally take ~ 3 minutes due to the viscosity; but pay special attention to the corners.

Twinpacks are ideal for small to medium production runs, prototyping and on-site or field use.

Part Number Table

Description	Part Number
Epoxy Composite, Black, Twinpack, 250g	MP000422

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