# Polyurethane Composite



# RoHS Compliant

# **Description**

The product from multicomp-Pro is a flexible re-enterable polyurethane system designed to encapsulate electrical and electronic components requiring flexibility and clarity.

It has excellent electrical insulating characteristics, low viscosity, fast curing, low embedment stress and low water absorption

Properties	Result	Unit
Peak Exotherm (250g)	45	°C
Shrinkage (volume)	0.2	%
Thermal conductivity	0.22	W/mK
Temperature range	-50 to +120	°C (application & geometry dependent)
Dielectric Strength	18	kV/mm
Volume Resistivity	1.2 × 10 <sup>12</sup>	ohm-mm
Surface Resistivity	1.1 × 10 <sup>12</sup>	ohm
Hardness	25	Shore A
Heat Deflection	Flexible	
Flame retardant	No	
Thermal expansion	100-125	
Loss Tangent	0.03	@ 50 Hz
Permittivity	3.2	@ 50 Hz
Tg	-25	°C
Comparative tracking index	>600	V
Water Absorption (30 days @ 25°C)	0.4	%
Elongation at break	~75	%

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Clear	Clear	Clear
Specific Gravity	1.1	1.12	1.1
Viscosity (mPas) @ 25°C	270	2200	600

Mix ratio by weight 1.47:1 Mix ratio by volume 1.36:1

## Cure Schedule (150g)

Tomporoturo	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
*RT	35	40	24	72
60°C	-	-	4	8
80°C	-	-	1	2

Newark.com/exclusive-brands Farnell.com/exclusive-brands Element14.com/exclusive-brands



# Polyurethane Composite



\*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 are 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

#### **Mixing Instructions**

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 are removed the resin and hardener is thoroughly mixed within the bag and is immediately ready for use. Mixing will normally take ~ 2 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.

#### Cleaning

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

#### Storage and Shelf Life

12 months @ 25°C

Bulk containers should be inverted every two to three weeks to reduce the accumulation of the fillers on the bottom of the containers.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing.

Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties.

Storage at 20 ±5°C (60°F to 86°F) is recommended to ensure full shelf life.

### **Health and Safety**

MP000428 health and safety data or our technical service department for individual/specific advice.

### **Part Number Table**

Description	Part Number
Polyurethane Composite, Clear, Twinpack, 250g	MP000428

Important Notice: This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/exclusive-brands Farnell.com/exclusive-brands Element14.com/exclusive-brands

