

Description

The product from multicomp-Pro is a two-part, low viscosity room temperature curing polyurethane resin. It has been designed for the manufacture of badges and decals, LED Units and high-quality castings.

It has excellent long-term UV stability, scratch and mark resistant and easy to mix and process

Properties	Result	Unit
Water Absorption (30 days @ 25°C)	1.17	%
Hardness	75	Shore A
Operating Temperature	-55 to +120	°C (application & geometry dependent)
Thermal Conductivity	< 0.21	W/mK
Tensile Strength	~15	MPa
Elongation at Break	100	%
Compressive Yield Strength	<10	MPa
Coefficient of Linear Expansion	100-150	pp/m°C
Volume Resistivity	1.3×10^{12}	ohm.cm
Surface Resistivity	1.4×10^{12}	ohm
Electric Strength	20	kV/mm
Refractive Index	1.47-1.48	Clear version only

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Water Clear	Water Clear	Water Clear
Specific Gravity	1.06	1.16	1.11
Viscosity (mPas) @ 25°C	600	600	600

Mix ratio by weight 0.92:1

Mix ratio by volume 1:1

Cure Schedule (150g)

Temperature	Working Life	Gel Time	Tack Free Time	Light Handling	Full Cure
	(minutes)	(minutes)	(minutes)	(hours)	(hours)
*RT	10	20	40	6	36
40°C	-	-	20	2	4
60°C	-	-	-	1	2

*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.

Polyurethane Composite

multicomp^{PRO}

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

Health and Safety

MP000424 health and safety data or our technical service department for individual/specific advice.

Part Number Table

Description	Part Number
Polyurethane Composite, Water Clear, Twinpack, 250g	MP000424

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