

DINITROL 870 MMA

Structural Adhesive

DINITROL 870 MMA is a fast curing, easy to use structural 2-component methyl methacrylate adhesive, designed for structural bonding of plastic, metal and composite assemblies.

- » Grey-white
- » Isocyanate-, phthalate-, solvent-, PVC- and siliconefree
- » Thixotropic
- » Overpaintable
- » Gap filling up to 5 mm
- » Very good impact, peel and shear strength
- » Does not attack surfaces
- » Resistant to UV, ageing and chemicals



Equipment

**DINITROL PR-TOOL 2K 12-P,
FOR 840/860/870/880**
Art. No. 1726000

DINITROL 587

Art. No.	Size	Package	Color
12531	50 ml	Double-Cartridge	Grey-white

DINITROL 870 MMA

Technical Details

Characteristics

DINITROL 870 MMA is a fast curing, easy to use structural 2-component methyl methacrylate adhesive, designed for structural bonding of plastic, metal and composite assemblies. DINITROL 870 MMA cures by a chemical reaction of the two components (mixing ratio 1:1), forming a durable polymer resistant to UV-radiation and ageing.

The product has a processing time of 4 to 6 minutes and reaches 75% of its final strength after 20 minutes at room temperature (23 °C).

DINITROL 870 MMA offers a combination of high strength and stiffness as well as the ability to bond a wide range of substrates with following characteristics:

- Isocyanate-, phthalate-, solvent-, PVC- and silikonfrei
- Thixotropisch

- Overpaintable
- Gap filling up to 5 mm
- Very good impact, peel and shear strength
- Does not attack surfaces
- Resistant to UV, aging and chemicals

Application

DINITROL 870 MMA is suitable for bonding metals, plastics and other materials.

Plastic:

PMMA, ABS/ASA, PVC, Polycarbonate, Acrylic

Composites:

Polyester, SMC, GRP, Vinyl Ester, Epoxy

Metals:

Aluminium, Stainless Steel, Steel, Galvanised Steel

For additional information, please consult DINOL GmbH.

Method of use

Dinitrol 870 MMA can easily be dispensed with a hand- or air pressure gun at temperatures between +15°C and 25°C. Temperatures below 18°C will slow the cure speed; temperatures above 25°C will increase the cure speed. The viscosities of parts A and B of this adhesive are affected by temperature.

The surfaces to be bonded should be clean, dry and free from dust and grease. In general we recommend isopropanol as cleaner.

Connect the mixertip to the cartridge and press out half length of the mixertip of the mixed adhesive. Do not use this adhesive. This is important to be sure that you have a 100% mixture of the 2 components. The second possibility would be to express material without static mixer until both components flow out, then put on the static mixer, no further material needs to be discarded. After applying the adhesive, join the parts to be joined within the pot life and fix if necessary. After that, the parts to be joined should no longer be moved.

This product is only suitable for experienced users. Preliminary tests are recommended for special applications.

Storage

The unopened cartridge has a shelf life of 9 months when stored between 5°C and 25°C.

Lap-shear-strength

Substrate	Joint thickness	Lap-shear-strength
CRS	1 mm	25,1 MPa
Aluminium	1 mm	22,3 MPa
Galvanized Steel	1 mm	19,5 MPa
CrNi Steel	1 mm	20,4 MPa
SMC	1 mm	3,2 MPa
PP	1 mm	2,4 MPa
PMMA	1 mm	5,3 MPa
CFK	1 mm	14,9 MPa

Comp. A - Hazards identification

2.1. Classification of the substance or mixture
GB CLP Regulation

Flam. Liq. 2; H225; Skin Irrit. 2; H315; Eye Dam. 1; H318;
Skin Sens. 1; H317; STOT SE 3; H335; Aquatic Chronic 3; H412

Comp. B - Hazards identification

2.1. Classification of the substance or mixture
GB CLP Regulation

Flam. Liq. 2; H225; Skin Irrit. 2; H315; Skin Sens. 1; H317;
STOT SE 3; H335; Aquatic Chronic 2; H411

For all relevant safety advices please read the material safety data sheet or the packaging label.

Technical Data

Basic material	Methyl methacrylate (MMA)
Colour	A- and B-Component are grey-white
Curing method	free radical peroxide initiated
Mixing ratio	1 : 1
Potlife (23°C)	approx. 4 - 6 minutes
Fixing time (23°C)	approx. 20 minutes
Viscosity	40000 to 60000 mPas
Fully cured	approx. 24 hours
Shore hardness D (EN ISO 868) 23°C	approx. D63
Specific gravity mixture	approx. 1.0 g/ml
Gap filling	1 mm to 9 mm
Tensile strength (ASTM D638) 23°C	approx. 24 MPa
Elongation at break (ASTM D638) 23°C	1800 MPa
E-Modulus (ASTM D638) 23°C	approx. 33 %
Temperature resistance	-40°C till +125°C
Chemical resistance	excellent to hydrocarbons, acids and bases, salt solutions
UV- and weather resistance	excellent
Available in	50 ml double cartridges (other packaging on request)