

# 50ml Epoxy Adhesive Cartridge



RoHS  
Compliant

## Description

A very fast curing, multi-purpose epoxy adhesive with excellent all-round properties.

Properties	Result	Unit
Hardness	80	Shore D
Operating Temperature	-40 to +120	°C (Application and geometry dependant)
Thermal Conductivity	0.3	W/mK
Tensile Strength	20	mPa
Compressive Yield Strength	< 10	mPa
Coefficient of Linear Expansion	70 - 90	ppm/C
Volume Resistivity	13 <sup>10</sup>	Ω.cm
Electric Strength	15	kV/mm
Water Absorption (7 days @ 23°C)	0.80	%

Physical Data (approx. – values)	Resin	Hardener	Mixed
Colour	Light Yellow	Amber	Pale Yellow
Specific Gravity	1.18	1.14	1.15
Viscosity (mPa.s) @ RT	150.000	100.000	120.000

Mix ratio by weight	1:1
Mix ratio by volume	1:1

## Lap Shear Adhesion

Pre-treatment Abrasion with 300 grit emery and solvent wipe

Aluminium to Aluminium	7.6 MPa	ABS to ABS	6.2 MPa
Copper to Copper	9.1 MPa	Nylon 6 to Nylon 6	2.3 MPa
Stainless Steel	5.8 MPa	Acrylic to Acrylic	3.2 MPa

## Cure Schedule (50ml)

	Working Life	Gel Time	Light Handling	Full Cure
Temperature	(minutes)	(minutes)	(hours)	(hours)
RT*	4	5	6	24
40°C	4		3	12
60°C	2		1	4

\*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.



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## 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

12 months at 25°C.

Cartridges should be stored horizontally

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 ±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.

It is essential for best results that the cartridge is 'balanced' before use to ensure correct mixing. Loading the cartridge into the gun before attaching the mixer element and pumping the gun to push a small amount of the contents forward will achieve this. Wipe the excess from the cartridge tip and add the static mixer.

## Part Number Table

Description	Part Number
50ml Epoxy Adhesive Cartridge	MC001843

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