



LOCTITE 406

• PRODUCT DESCRIPTION

LOCTITE 406 is intended to glue plastic or rubber parts when a quick fixing is required.

LOCTITE 406 presents the following characteristics:

Technology	Cyanoacrylate
Chemical nature	Ethyl cyanoacrylate
Aspect	Straw yellow, colourless and transparent liquid
Components	Monocomponent
Viscosity	Low
Polymerization	Dampness
Application	Gluing
Substrates	Plastics and rubbers

Tariff : 20.30 €Excluding tax

**CARRIAGE COSTS ARE CALCULATED ACCORDING
TO THE DELIVERY POINT**



• TYPICAL DATA FOR POLYMERIZATION

Polymerization speed according to substrate

Polymerization speed depends on substrate. The board below gives cure time obtained with several materials in 22°C and 50% of relative dampness. It is defined as the time that allows one to have a shear resistance of 0.1 N/mm².

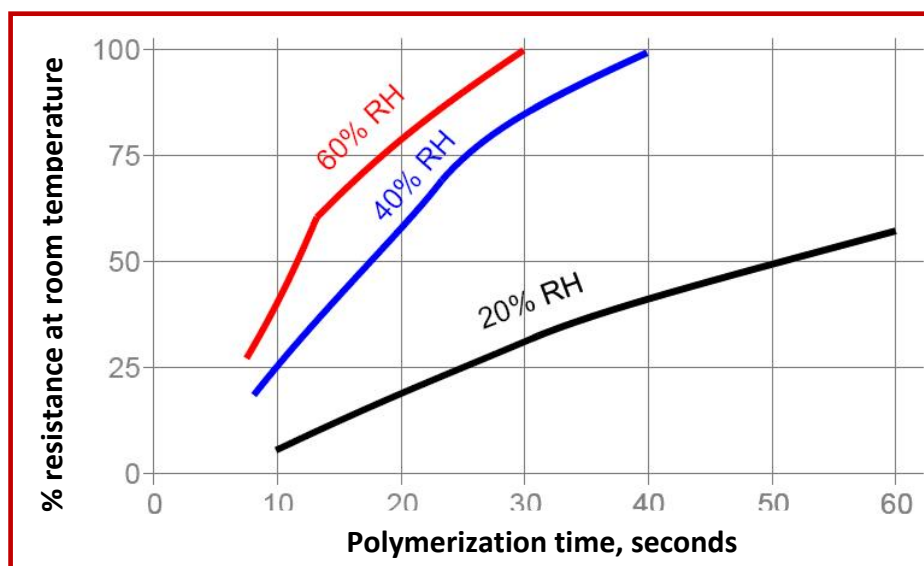
Cure time, seconds:

Steel (degreased):	10 up to 20
Aluminum without oxide:	2 up to 10
Bichromated zinc-plated surface:	30 à 90
Neoprene:	< 5
Nitrile rubber:	< 5
ABS:	2 up to 10
PVC:	2 up to 10
Polycarbonate:	15 up to 50
Phenolic Materials:	5 up to 15

Polymerization speed according to the clearance

Polymerization speed depends on the assembly clearance. A low clearance increases polymerization speed; a most important clearance can reduce it.

Polymerization speed depends on the surrounding relative dampness. The graph illustrates the evolution of the traction resistance according to time, for a Buna rubber N, at different dampness rates.





Polymerization speed according to the activator

When polymerization speed is too long because of important clearances, the use for an activator on one of the surfaces will allow the increasing of this speed. However, it could lead to a reduction of the assembly's final resistance and it is consequently advisable to do preliminary tests.

• TYPICAL PROPERTIES OF POLYMERIZED PRODUCT

After polymerization 24 h up to 22 °C

Physical properties:

Linear dilatation ratio ISO 11359-2, $80 \times 10^{-6} \text{ K}^{-1}$
 Thermal conduction ratio ISO 8302, 0,1 W / (m.k)
 Temperature of vitreous transition, ASTM E 228, 120 °C

Electrical properties:

Volume resistivity, IEC 60093 $10 \times 10^{15} \Omega \text{ cm}$
 Surface resistivity, IEC 60093 $10 \times 10^{15} \Omega \text{ cm}$
 Dielectric rigidity, IEC 60243-1 25 kV/mm
 Dielectric constant/dispersion factor, IEC 60250:

1,1-kHz	2.65/<0.02
1-kHz	2.75/<0.02
10-kHz	2.75/<0.02

• POLYMERIZED PRODUCT PERFORMANCES

Adhesive properties

Polymerization 24 h up to 22°C

Shear sample, ISO 4587 :

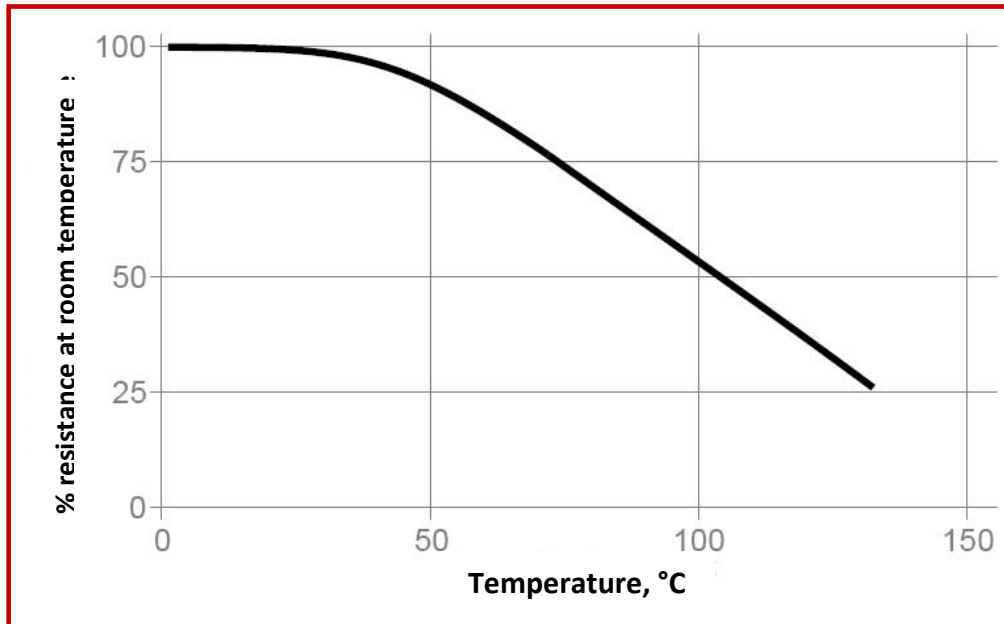
Steel (sandy)	18 up to 26 N/mm ²	(2,610 up to 3,770psi)
Aluminum without oxide	11 up to 19 N/mm ²	(1,595 up to 2,755 psi)
Bichromate zinc plated surface	6 up to 14 N/mm ²	(870 up to 2,030 psi)
ABS	4 up to 6 N/mm ²	(580 up to 870 psi)
PVC	4 up to 6 N/mm ²	(580 up to 870 psi)
Phenolic materials	3.5 à 4.5 N/mm ²	(725 up to 2,175 psi)
Polycarbonate	5 up to 15 N/mm ²	(510 up to 650 psi)
Nitrile	5 up to 15 N/mm ²	(725 up to 2,175 psi)



- ENVIRONMENT RESISTANCE PERFORMANCE

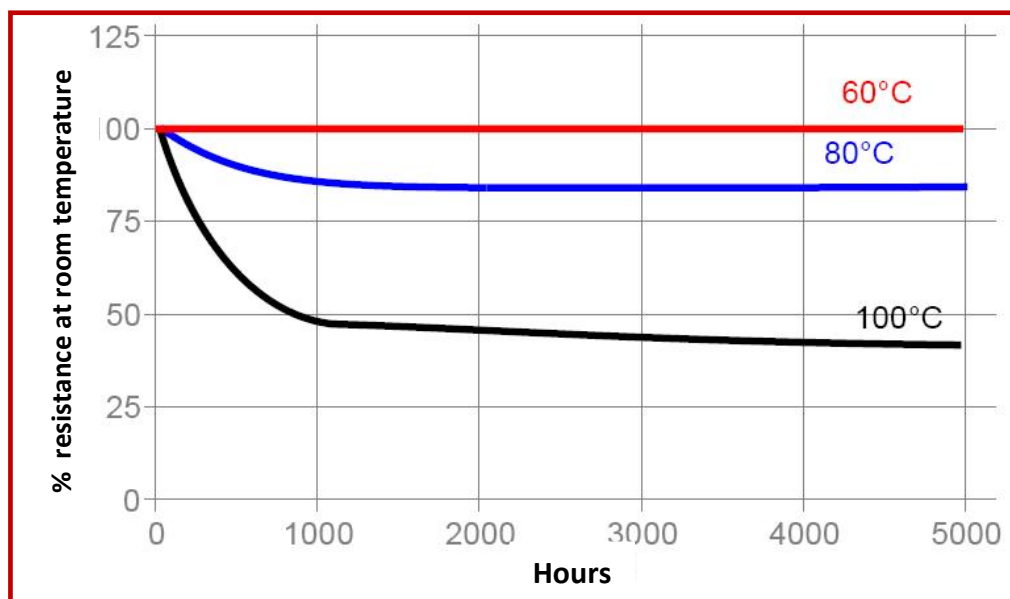
Immediate resistance

Measured according to temperature



Resistance to immediate ageing

Ageing at the indicated temperature and measurement after a return to 22°C





Resistance to chemical products

Ageing following the indicated conditions and measurement after return to 22°C

Chemical agent	°C	% of the initial resistance preserved after		
		100 h	500 h	1,000 h
Motor oil	40	100	100	95
(Leaded) gasoline	22	100	100	100
Water/glycol 50/50	22	100	100	100
Ethanol	22	100	100	100
Isopropanol	22	100	100	100
Freon TA	22	100	100	100
Air 95% of relative dampness	40	80	75	65
Air 95% of relative dampness polycarbonate	40	100	100	100

• GENERAL INFORMATION

The use of such a product is not advisable for systems that carry pure oxygen or for combinations that contain too much oxygen; it shouldn't be used as a tightness product in relation with chlorine or for other highly oxidizing bodies.

Recommendations for implementation

1. To obtain the best performances, the surfaces must be clean and exempt from fats.
2. The product gives better results at low clearance (0.05 mm).
3. Excessive adhesive could be dissolved with Loctite cleaning solvents, nitromethane or acetone.

Note

The information contained in this document is given as information. We cannot take the responsibility for the results obtained by outsiders through methods we are not able to control.