precote 86

precote 86-3, precote 86-8

High-Strength and Heat-Resistant Thread Coating with Controlled Friction

Description

precote 86, precote 86-3 and precote 86-8 are varnish-like, solvent free coating systems based on microencapsulated acrylates for sealing and locking of threaded parts. The dried film is tack-free and non-sticky. The microcapsules are destroyed by compressive and shear stress during assembly, and the released components mix and harden.

Application

All versions of precote 86 are high strength thread locking coatings with controlled friction and a locking effect even at high temperatures. They can be used on all types of external and internal threads.

- precote 86: for threads > M6 and pitches > 1mm
- precote 86-3: accelerated curing for threads > M6 and pitches > 1mm
  Yellow UV marker visible under UV light
- precote 86-8: for threads ≤ M6 or pitches ≤ 1mm to max. M10x1
  White UV marker visible under UV light

The physical data and chemical resistance of precote 86-3 and precote 86-8 match with the data of the standard version precote 86 after complete curing.
The coating can be used in all kind of assembly procedures, particularly for serial production.
Areas of application are electronics, two wheel and automotive industry, household appliances, office machines, computer industry, electric motors, e-mobility, etc.

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Properties

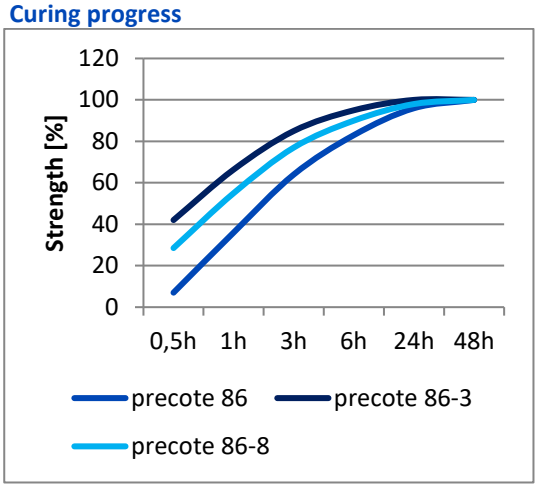
- precote 86 and precote 86-8 exceed the required values of DIN 267-27 after 6 hours curing at RT. Fast curing precote 86-3 exceeds these values after 30 minutes
- Controlled thread friction
- Constant assembly properties
- Temperature range up to +170°C (+340°F) (DIN 267-27), resp. +200°C (+390°F) (GMW 14657)
- Good chemical and temperature resistance
- Forms a dry and tack free film
- Captive part of the thread
- No post-curing even after repeated temperature exposure
- Easy disassembling after BLT or BAT
- Prevents corrosion in the threaded connection

Technical data

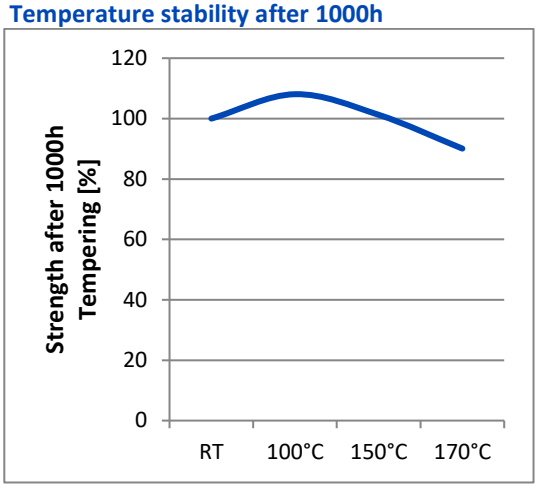
Chemical Type		Acrylate
Color[1]		blue
Thread friction μ_{Thread}[2]		0,18 – 0,25
Curing time[3] at RT to final strength		ca. 24h
Curing time[3] at RT	precote 86:	6h
to exceed the values	precote 86-8:	6h
according to DIN 267-27	precote 86-3:	0,5h
Prevailing-in torque PIT on assembly[3]		< 3 Nm
Strength without preload BAT[3]		> 20 Nm
Prevailing-out torque POT[3]		< 55 Nm
Temperature range		-60°C to +170°C
according to DIN 267-27		-75°F to +340°F
Temperature range		-60°C to +200°C
according to GMW 14657		-75°F to +390°F
Chemical resistance		**Test temperature**
tested according to all current automotive standards	Engine oil	150°C
and DIN 267-27,	Super-grade gasoline	23°C
storage time 1000h	DOT4 brake fluid	90°C
	Anti-freeze 100%	120°C
	Anti-freeze/Water 50:50	120°C
	Automatic transmission oil	150°C
	Transmission oil	120°C
	Polyurea AdBlue®	23°C

[1] This product information is also valid for special colors. The specified color is not a primary product feature. The color may vary slightly due to the manufacturing process and the formulation. This does not affect the quality of the product.
[2] Test according to DIN EN ISO 16047. All values apply to screws M10 ISO 4017-8.8 plain finish and nuts M10 ISO 4032-10 plain finish. All other surfaces could deliver different values.
[3] Test according to DIN 267-27. All values apply to screws M10 ISO 4017-8.8 plain finish and nuts M10 ISO 4032-10 plain finish. All other surfaces could deliver different values.

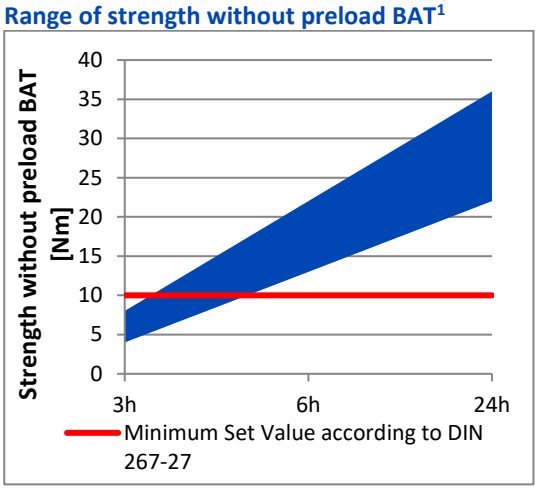
Curing progress



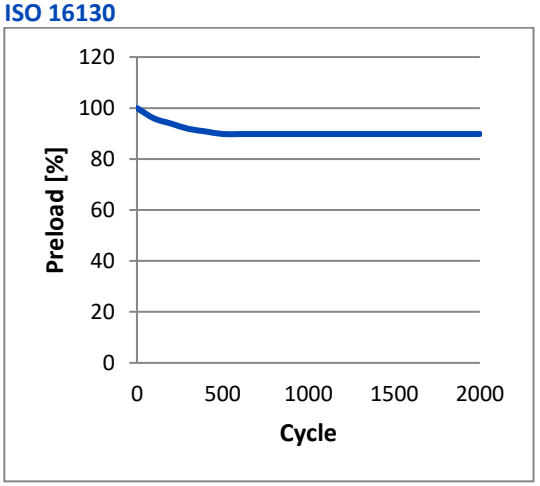
Temperature stability after 1000h



Range of strength without preload BAT[1]



Vibration test according to Junkers DIN 65151 and ISO 16130



[1] Test according to DIN 267-27. All values apply to screws M10 ISO 4017-8.8 plain finish and nuts M10 ISO 4032-10 plain finish. All other surfaces could deliver different values.

All versions of precote 86 meet and exceed technical specifications of following companies

Aisin, Audi, Autoliv, BASF, Bendix, BMW, Bosch, Bridgestone/Firestone, Brose, Chrysler, Continental, Cummins, DAF, Daimler, Dana, Delphi, Denso, Faurecia, Fiat, Ford, Geely, General Motors, Getrag, Hitachi, Honda, Hyundai Kia, Hyundai Mobis, Johnson Controls, KWC, Lear, Magna, Magneti Marelli, Mahle, MAN, Michelin, Opel, Panasonic (Matsushita Electric), Porsche, PSA, Renault, Rover, Saab Scania, Schaeffler, Siemens, Stihl, Tesla, Toyota, TRW Automotive, Valeo, Volvo, VW, ZF Friedrichshafen and many more

Storage

Shelf-life of coated parts 4 years at max.30°C and max. 65% relative humidity.
Please note the omniTECHNIK packaging information.

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