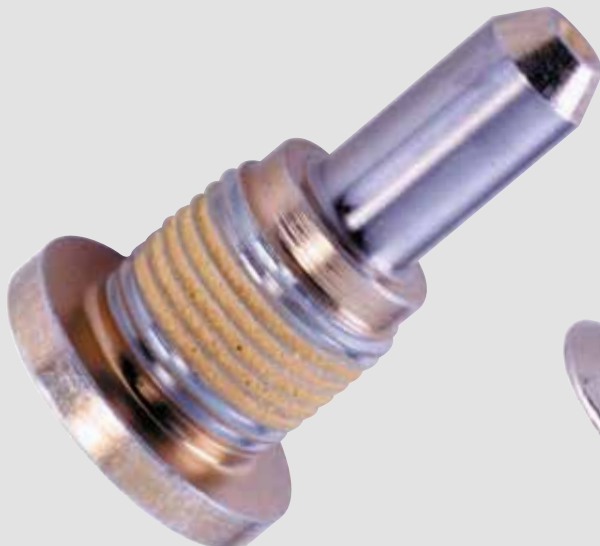
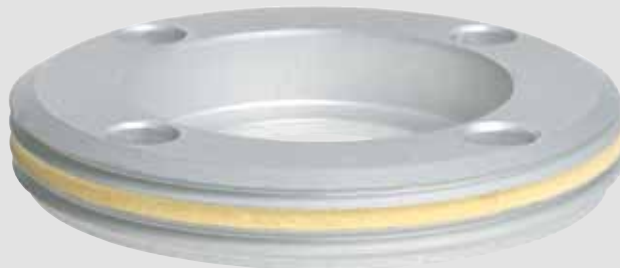


Antiloosening lock made of **Microencapsulated Adhesives**



precote® 30
precote® 80
precote® 85
Scotch Grip™ 2353
Scotch Grip™ 2510
LOCTITE® 2040
LOCTITE® 2045

In compliance with
DIN 267-27

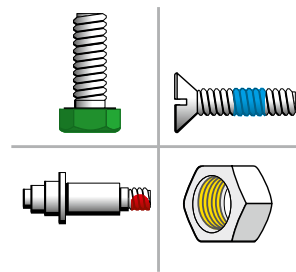


**Save
Glue**
Grip

Seal

Lubricate

Protect



Accidental release often causes the failing of dynamically loaded, bolted connections, especially when they are stressed transversely to the axis. That means cases of damage because of partial or complete loss of prestressing force which implicates fatigue fracture or loosening of the bolts. Loosening is attributed to the internal torque of the connection; it arises when the frictional resistance between connecting surface and component, as well as between bolt and nut thread, disappears. From this it follows that a dynamically loadable connection needs to maintain the frictional resistance. Several measures are possible

to ensure this, but the best are structural precautions. If they are not enough, it will be necessary to secure the bolted connections against accidental loosening by an adhesive bond. These are, for instance, precote® – microencapsulation (system omniTechnik), 3M™ Scotch-Grip™ – microencapsulation, or the Loctite®-system.

Microencapsulated Adhesives

Microencapsulation is a method for coating every type of threaded component, regardless of shape and size, certainly each standard component, no matter with or without head. The microencapsulation systems keep their performance for at

least 4 years under normal dry conditions and preferably, at temperatures between 20 °C and 25 °C. For further details, please refer to DIN 267-27.

Type	Colour	Operating temperature °C	Friction coefficient of thread μ	Curing time h	Effect
oT precote® 30*	yellow	-60 to +150	0.10-0.15	6	medium tight
oT precote® 80*	red	-60 to +170	> 0.25	6	highly tight, sealing
oT precote® 85*	turquoise, orange	-60 to +170	0.10-0.15	6	highly tight, sealing
Scotch Grip™ 2353	blue	-30 to +110	0.13-0.19	24	highly tight, sealing
Scotch Grip™ 2510	orange	-30 to +200	not known	24	highly tight, sealing
LOCTITE® 2040	red brown	-55 to +180	not known	72	highly tight, sealing
LOCTITE® 2045	red brown	-55 to +180	not known	72	highly tight, sealing

Further product information is available on request!

*Threads < M6 are coated with precote 30/8, 80/8, 85/8.

* for a faster curing time are coated with precote 30/3, 80/3, 85/3

Curing

When screwed into the mating thread, the micro-capsules are destroyed by pressure and/or shearing force. With this, the adhesive and the curing agent are released and mixed, so they can interact (polymerisation). Then, the adhesive cures and the desired securing effect, as well as an extra sealing effect, are reached. The curing of the microencapsulated adhesives starts shortly after the assembly. It will be completed after 24 hours, but it can be accelerated by higher temperatures.

Advantages and benefit

- Bonding and sealing function
- Reliable locking against accidental release
- Resistant to oil and grease after it has cured
- No assembly risk
- High safety level
- Undetachable part of the threaded fastener
- Consists of a dry, resistant to touch, locking coating which is ready for use at any time
- The fasteners can be handled as bulk material

This technical information shall only show examples for applications or suggestions. Their adoption or implementation needs to be tested.