

MARYLAND METRICS

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TECHNICAL INFORMATION and DATA

Securing against loosening

Microencapsulation

Microencapsulation is a bonding pre-coating for threaded parts (M3 and larger). The coating contains two separated microencapsulated components of a modified acrylate system. Varnish functions as carrier for the micro capsules.

When the coated thread is tightened, the micro capsules in the layer are broken and the components are mixed together. The mixture hardens rapidly and fully secures the joint against unscrewing, even at the greatest dynamic lateral forces or vibration.

Microencapsulation is today regarded as one the most effective methods of securing screws in large series.

Advantages:

- The locking feature is an integrated part of the fasteners.
- Major cost savings in assembly; coated parts can easily be assembled automatically.
- Effective sealing of thread (possibility of through-boring instead of blind hole).
- Outstanding results with both low and high tension screw connections.
- Good resistance to chemical influences.
- No damage to surface.
- Coated parts can be stored for up to three years before assembly.
- Corresponds to DIN 267 / part 27

Product	Color code	Torques M_{LB}/M_A	Coefficient of friction in the thread μ thr	Functional strength after h	Temperature range for application
Precote® 30	yellow	< 1	0,14–0,16	3 h	– 60 °C to +120 °C
Precote® 80	red	> 1	0,26–0,28	3 h	– 60 °C to +180 °C
Precote® 85*	blue	> 1,1	0,16–0,18	6 h	– 50 °C to +150 °C
Precote® 100	green	> 1,3	0,12–0,15	6 h	– 50 °C to +120 °C

* **Special = reduced coefficient of friction**

$\mu_{tot.} = 0,11$ (specially suitable as locking device for high-tensile bolted connections)