

# LOCKING BY BONDING

## PRE-COATING

Pre-coating is a technology developed about thirty years ago for automotive industry. During the '80s, fasteners were secured by liquid adhesives but the deposit caused much troubles on the assembly lines. The pre-coat solution came forward because of its easy to use and its favorable economic result.

Today, pre-coating is used in any industry. Our special machinery enables to realize small series (1000 units) as well as much larger series (1 million units) for a wide range of applications : M1 to M20 screws, M5 to M30 nuts, axes, pins, connectors, plugs, inserts ... special parts.



## LOCKING BY BONDING FUNCTION

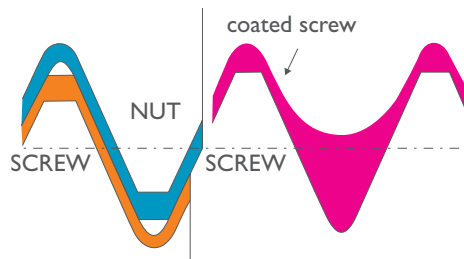
The assemblies unscrew because of the vibrations, shocks and thermic dilatations. Numerous technologies have been developed in order to secure the screwed assemblies to avoid untimely unscrewing.

**The most efficient solution against unscrewing is to bond the threads by the pre-coat technology.**

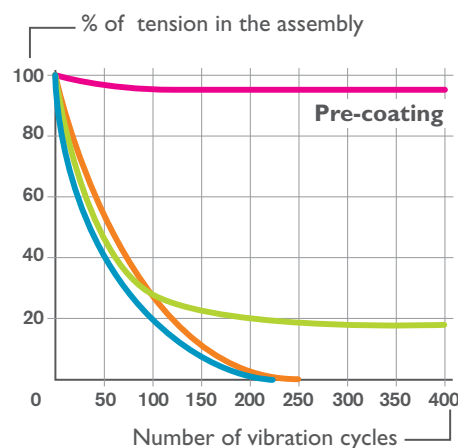


The technique consists in pre-coating the threads with a microencapsulated adhesive which is activated only while screwing. Upon assembly, the adhesive components are released and creates a bond between the male and female threads. It is the most effective anti-unscrewing solution.

### PRINCIPLE OF THE MICRO-CAPSULATED PRODUCTS



### COMPARISON BETWEEN RETAIN SOLUTIONS



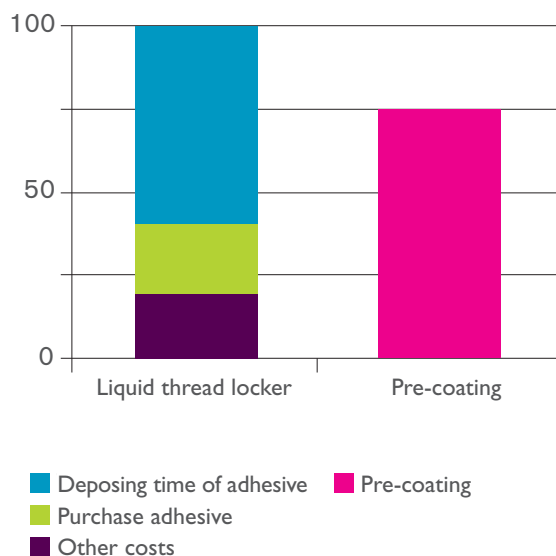
- Standard screw ■
- Screws + Elastic washer ■
- Nut + Nylon ring ■
- Screw + **Pre-coating** ■

## ADVANTAGES

The pre-coated fasteners replace the common thread locking solutions thanks to utmost **technical performances and economical advantages**:

- Excellent performances: excellent resistance against vibrations
- Easy conception: replaces standard screws without a re-conception of the assembly
- Rapid assembly: no need of a washer nor adhesive
- Technical control: the deposited volume of the pre-coating product on the assembly is always the same
- Excellent quality: no omission possible of the coating process
- Important reduction of the assembly costs: high productivity in workshop and on construction site
- Suppression of the hygienic and security problems due to the fluid adhesives.

### ECONOMICAL ASSESSMENT IN FAVOR OF PRE-COATING



## CHARACTERISTICS AND PRODUCTS

The pre-coating products that we apply come from long partnerships with many manufacturers.



Suppliers	Product	Color	Functions
<b>3M</b>	3M 2353	Dark blue	High strength
	3M 2510	Orange	High strength
<b>precote®</b>	Precote 30	Yellow	Low strength and sealing
	Precote 80	Green or Pink	High strength
	Precote 85	Turquoise	Low strength with controlled torque

## QUALITY

Our processes are ISO 9001 certified and fulfill specific requirements in the automotive industry.



## APPROVALS

Our products are approved to many standards:

Renault CDC 39.02.010  
PSA B14.12.35  
DIN 267-27  
IFI 25/525  
BS 7795  
GM 6175  
FORD WX200 & 201

