

## FASTENERS THAT ADD VALUE

### SCREW FASTENERS CAN LOOSEN!

Screw assemblies can loosen under the effect of vibration, impact and heat expansion.

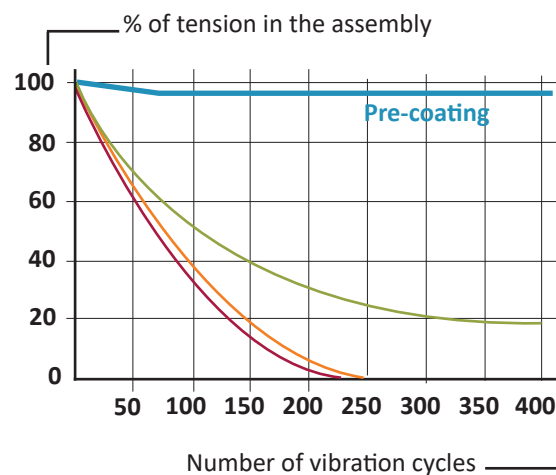
To secure assemblies that are screwed together and avoid any unforeseen loosening of screws and nuts, a variety of techniques have been developed: elastic washers, Nylon rings or patches, size interference, etc.

**The most effective solution for stopping loosening is pre-coating to ensure thread locking:**

This technique comprising pre-coating the threads with a dry thread locking compound that only becomes active during assembly.



### COMPARING THREAD LOCKING SOLUTIONS



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

### WHY USE PRE-COATED FASTENERS?

**Pre-coated fasteners replace conventional thread locking solutions offering incomparable technical and financial results:**

- Improved performance: unparalleled vibration resistance
- Facilitated design: replaces standard nuts and bolts with no need to redesign the assembly
- Fast assembly: no need for washers or adhesive
- Technical reliability: the amount of product deposited in the assembly is always the same
- Flawless quality: the thread locking process cannot be forgotten
- Significant assembly cost savings: high productivity in the shop or on-site
- Eliminates hygiene and safety issues linked to liquid adhesives



## INNOVATION

Thread locking using pre-coated fastener parts is achieved by factory coating parts with a thread locking compound, creating a dry patch on the screw or nut thread.

### TWO POSSIBLE SOLUTIONS:

#### THREAD LOCKING USING A MICRO-ENCAPSULATED ADHESIVE:

- This technique comprises pre-coating the threads with a micro-encapsulated adhesive that only becomes active during assembly.
- During assembly, the adhesive released by breaking the micro-capsules polymerises and bonds the threaded parts together.
- This is the most efficient solution to stop slackening.



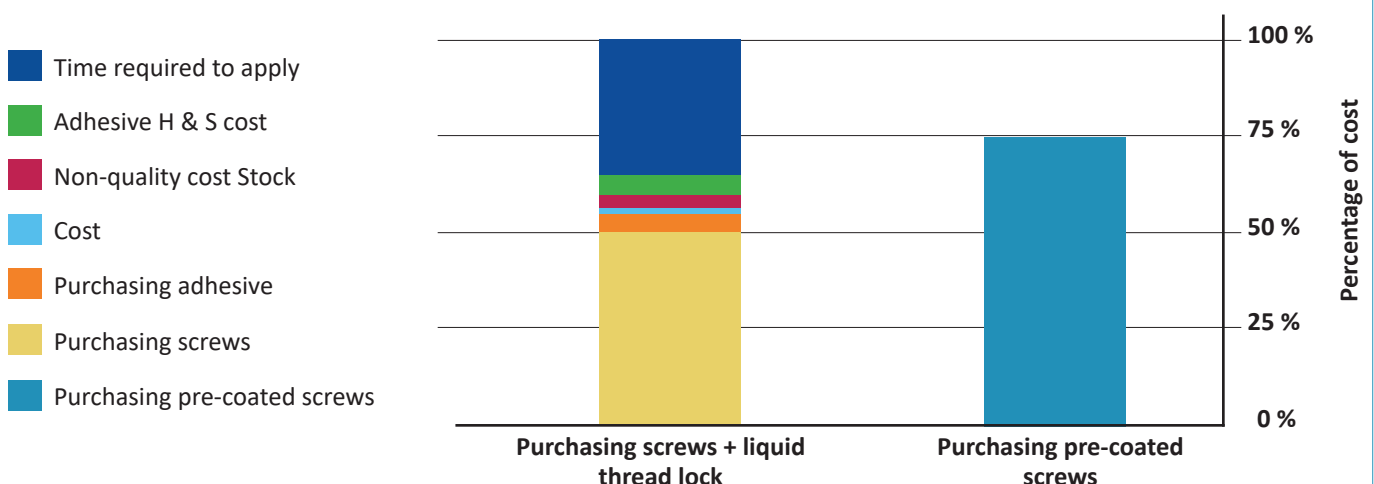
#### REPOSITIONABLE POLYAMIDE THREAD LOCKING SOLUTION:

- When the parts are screwed down, the polyamide deposited on the threads is compressed. The radial tension caused by the elastic product deformation causes the locking action.
- The locked parts can be repositioned as the polyamide deformation is reversible allowing parts to be screwed down and released a number of times.
- The polyamide brings two additional functions compared with a bare screw:
  1. It dampens vibrations thereby avoiding unforeseen slackening.
  2. It avoids the loss of the screw should it become slack.
- The thread locking function is active immediately after screwing down.



## FINANCIAL ASPECTS

Comparing a liquid thread locking solution with purchasing pre-coated screws







## PRODUCT TYPES

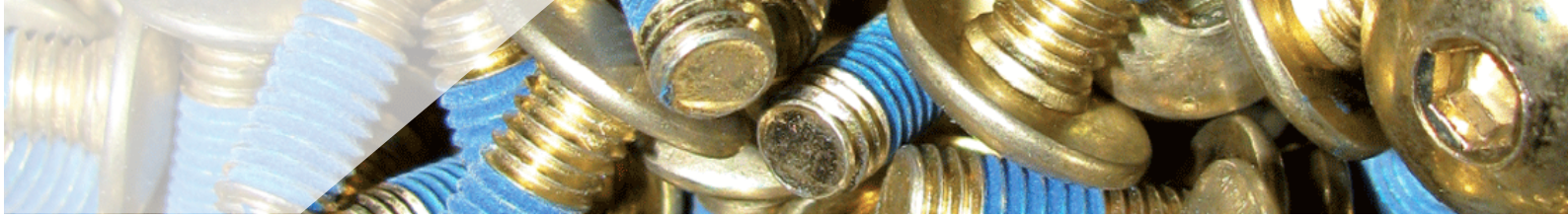
The products deposited on the threaded part of the fasteners are of different types depending on requirements:

	Brands	Products	Colours	Functions
Locking with an adhesive	<b>3M</b>	3M 2353	Dark blue	High strength
		3M 2510	Orange	High strength + high temperature
	<b>precote®</b>	Precote 30	Yellow	Low strength + sealing
		Precote 80	Green or Pink	High strength
		Precote 85	Turquoise	High strength
Repositionable locking	<b>precote®</b>	Precote 10-1	Green	Low strength + repositionable
	<b>NYLOK</b>	Tuflok®	Dark blue	Low strength + repositionable

## GENERAL PROPERTIES

- Resistant to water and cooling liquids
- Resistant to gasoline and engine oils
- Resistant to refrigeration liquids
- Very resistant to vibration and impacts
- Ensures assembly sealing
- Protects from corrosion
- Can be disassembled using standard tools
- No deterioration of assembly parts





## SOME EXAMPLES

Uniquely in Europe, Soprima Industrie covers a wide range of needs for all professionals looking for handy and innovative fasteners.

Allen head (CHC) screw	
Hex. head (TH) screw	
Flush hex. head (FTC) screw	
Hex. button head (BHC) screw	
Hex. (H) nut	
Hex. shoulder (HE) nut	

## QUALITY

Our facilities are all ISO 9001 certified and our quality system fulfils the specific requirements of the automotive and aeronautical industries.

