



ecosyn[®]-lubric
Tribological Dry Coating

BOSSARD

Bossard ecosyn[®]-lubric simple – clean– safe– economical



Easy to use

Cannot be forgotten

Defined lubrication

Short assembly times

Do you still grease when greasing?

Bossard ecosyn®-lubric Black is a new name to watch out for! It stands for a clean, reliable, process-safe and economical tribological dry coating for mechanically loaded fastening elements such as screws, washers and nuts.

Until recently this coating was only offered in black, which led to the introduction of the product name "industrial black".

Thanks to the growing demand for rational solutions and design aspects the same coating is now available in metallic («Bossard ecosyn®-lubric Silver»), which has considerable optical advantages for stainless screws in particular.

The specific properties such as friction coefficients, corrosion protection, heat resistance etc are to be assessed in accordance with the surface conditions and the application conditions. The necessary tests for safety-tested design can be conducted in Bossard AG's accredited testing and measuring laboratory.



Simple: No need for costly lubrication.

Advantages with Bossard ecosyn®-lubric



Simple

Drive screw in – tighten in accordance with regulations – ready!

- No costly lubrication
- No risk of erosion with stainless fastening elements.
- Even after a long period of use a connection with Bossard eco-lubric® is easy to disassemble



Safe

Bossard ecosyn®-lubric is an undetachable component of the fastening element.

- Lubrication cannot be forgotten
- Exact and clearly defined lubrication at all times
- Correct lubrication is also guaranteed in maintenance work



Safe: Exact and clearly defined lubrication at all times and delivered ready.



Clean

The lubricant is just there, where it should be – i.e. on the thread and on the contact surfaces.

- No dirty components or hands
- No adhesion of dirt to grease
- No costly cleaning work
- No disposal of empty containers (treated as special refuse)



Economical

Clear reduction in process costs throughout the entire life cycle.

- Fewer administration positions (for service centres too)
- No lubricating plans and instructions required
- Short assembly time
- Better corrosion resistance, longer life



Clean: Transportation and positioning is simple and clean.



Economical: More than 150 screw connections rationally assembled.

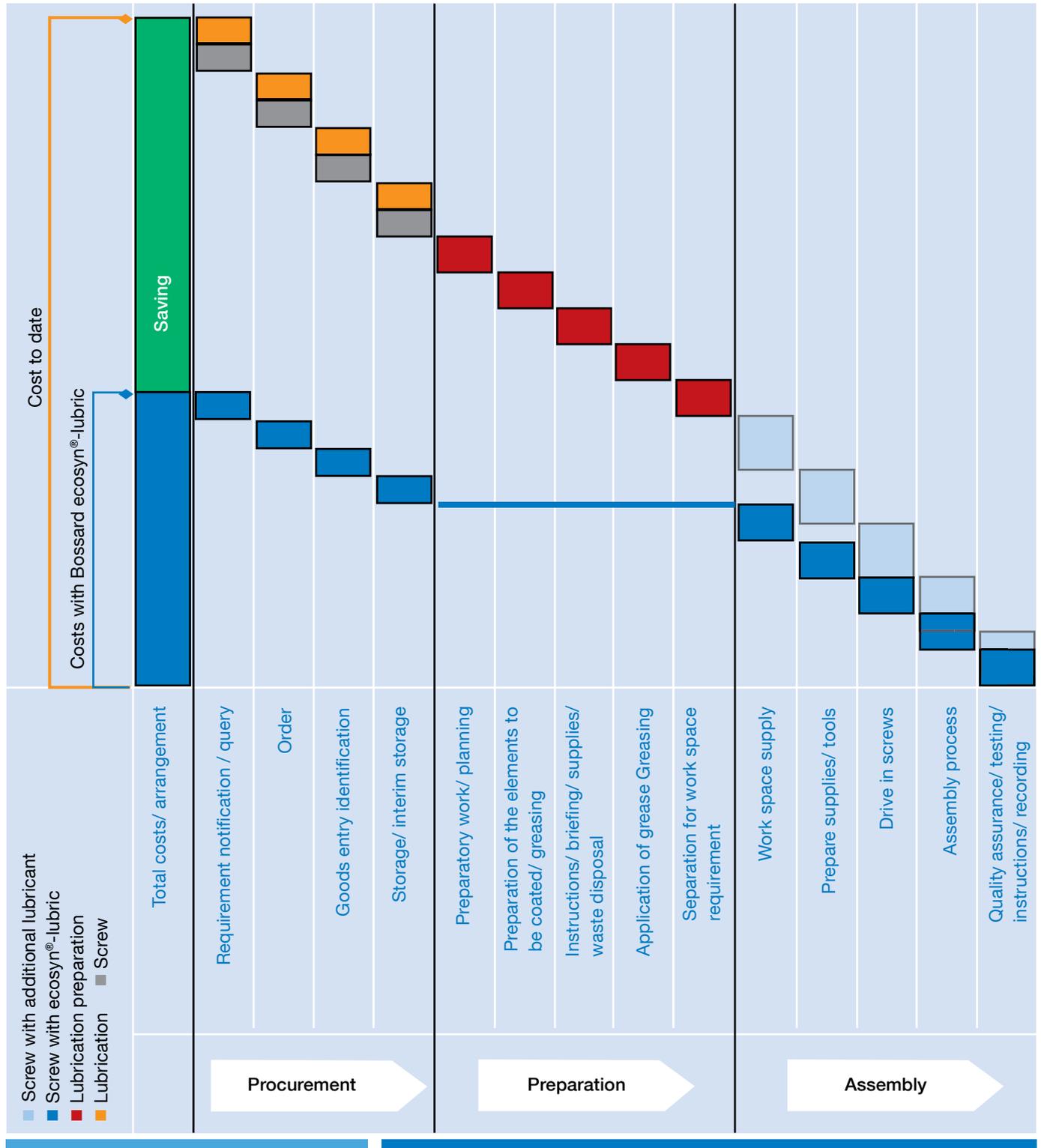
Cost reduction in production

Within the context of a «lean production» for shorter turnaround times and cost saving, the flow of all activities from notification to acceptance of the product should be perfectly designed.

Simple and robust added value processes is the formula for success. Additional activities in production and preparatory actions (e.g. prepare, clean, grease) create no inherent value and should thus be avoided.

Three questions concerning their use in cost saving:

1. Which persons are responsible for which stocks at work?
2. What is the logistical purpose of each individual item in the process?
3. Is the value stream chain/ process already efficiency-oriented?



What is Bossard ecosyn®-lubric?

Bossard ecosyn®-lubric tribological dry coating is a non-electrolytically applied, thin layered coating with integrated lubricating properties and additional corrosion protection. The coating consists of a composition of fluoropolymers and organic

submicroscopic solid lubricant particles, which are dispersed in carefully selected synthetic resin blends and solvents. The AFC coating (anti-friction coating) creates a smooth film, which balances all unevenness of the surface thereby optimising friction

under extreme loads and working conditions.

The synthetic resin in turn ensures better corrosion protection.

Corrosion protection

In the salt spray test under EN ISO 9227 NSS, screws and nuts are tested under different combination options. The table

shows reference values with other common surface treatments (Reference ISO 4042). An application specific corrosion

protection test can also be carried out.

Corrosion to red rust**

	> 36 h	> 72 h	> 200 h
ecosyn®-lubric Black			
Galvanised, yellow chromated			
Galvanised, blue passivated			

Friction coefficients

The test involved tightening the screw under laboratory conditions to the test load in accordance with DIN 946 / ISO 16047.

An application specific friction coefficient test can also be carried out.

Friction coefficients μ for galvanised blue passivated steel screws**

	0.1	0.12	0.14	0.16	0.24
ecosyn®-lubric Black					
With screw paste*					
Without treatment					

*(Friction coefficient-class B according to VDI 2230)

Its use with Bossard ecosyn®-lubric for an assured coating quality

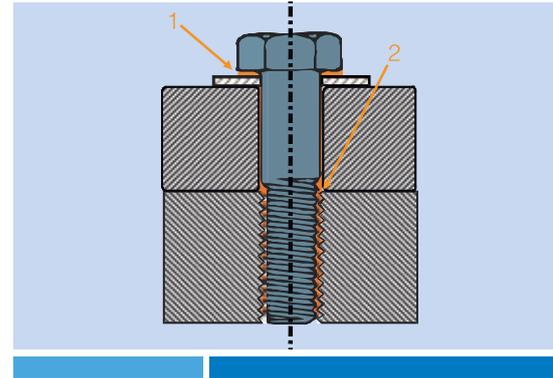
- Direct monitoring of the surface coating through friction coefficient test.
- Documented security for the screw connection design parameters
- Defined lubrication both for workshop assembly and repair and maintenance

** The test results are based on galvanised blue passivated steel fastening elements

The economical solution:

For the current challenges of rational assembly, **Bossard ecosyn®-lubric** is a very economical solution. The dry coating can also be applied to galvanised coatings (from thread M3). Through the “galvanised-blue-passivated” coating of steel fastening elements addi-

onal uses, such as a smaller friction coefficient distribution and improved corrosion protection can be achieved. Tests can be carried out in the accredited test and measuring laboratory in accordance with Bossard AG ISO/IEC 17025.



- 1 Greasing the contact surfaces
- 2 Greasing the threaded section