

ecosyn[®]-lubric

Tribological Dry Coating



“Bossard ecosyn[®]-lubric tribological dry coating is a non-electrolytically applied, thin layered coating with integrated lubricating properties and additional corrosion protection.”



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**

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.

	> 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. 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

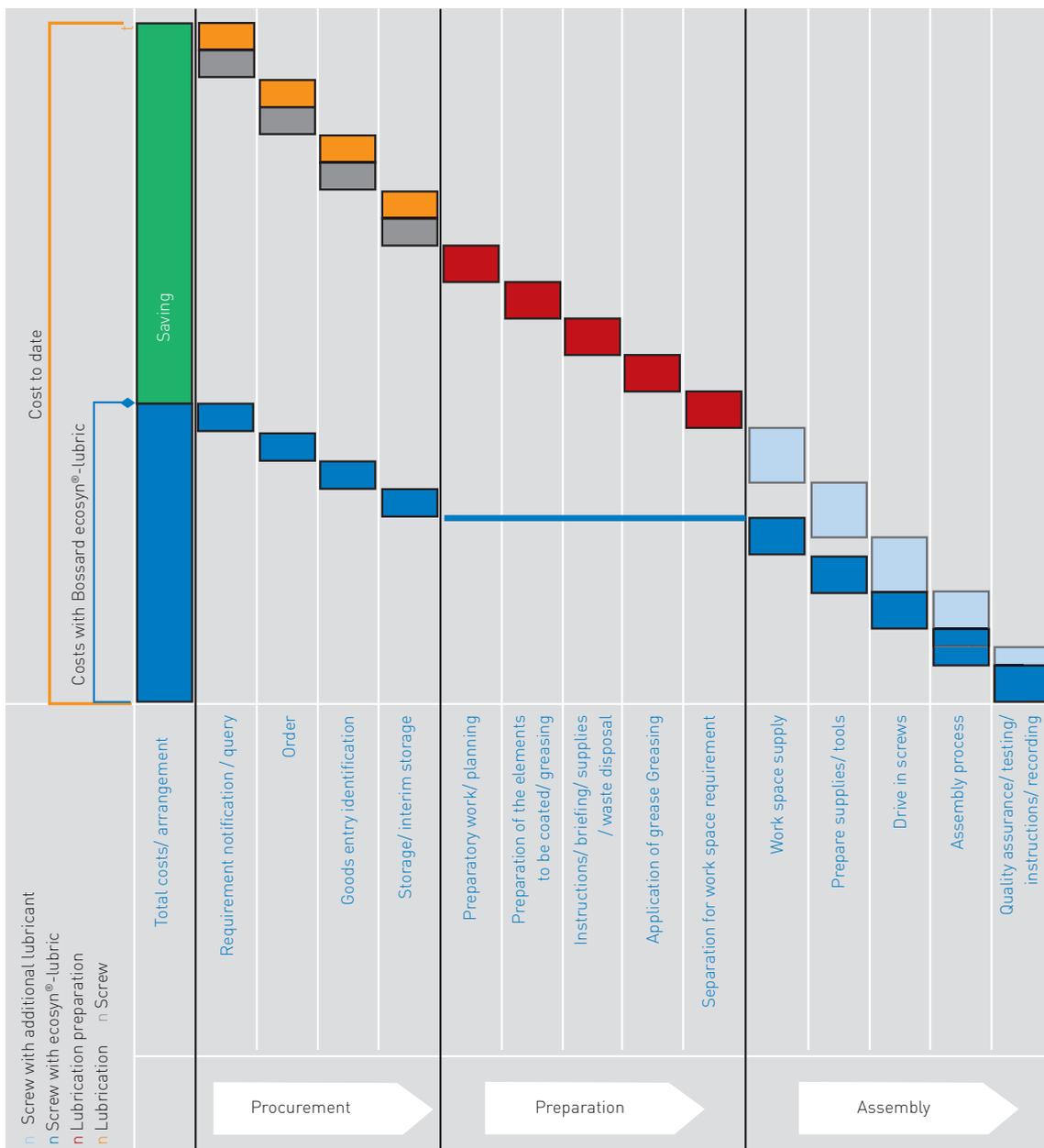
Cost reduction in production

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?



Subject to change without notice. Please refer to your local Bossard E-Shop for the current assortment and dimensions. Other variants upon request.

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.

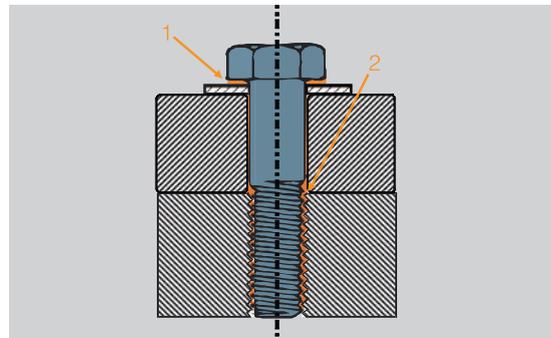
The specific properties such as friction coefficients, corrosion protection, heat resistance etc are to be assessed in accordance with the surface conditions and the application conditions. The necessary tests for safety-tested design can be conducted in Bossard AG's accredited testing and measuring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

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 additional 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

Advantages with Bossard ecosyn®-lubric

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 ecosyn®-lubric is easy to disassemble



Simple: No need for costly lubrication.

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

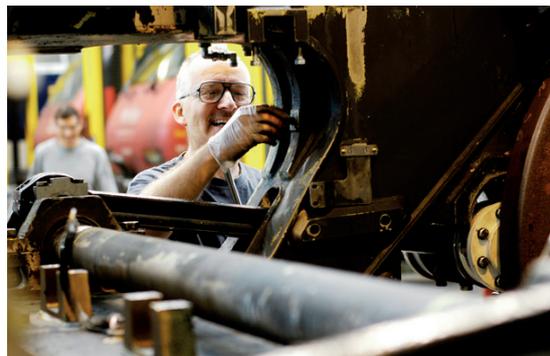
- Lubrication cannot be forgotten
- Exact and clearly defined lubrication at all times
- Correct lubrication is also guaranteed in maintenance work



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

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)



Clean: Transportation and positioning is simple and clean.

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



Economical: More than 150 screw connections rationally assembled.

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PROVEN PRODUCTIVITY – A PROMISE TO OUR CUSTOMERS

The strategy for success



From years of cooperation with our customers we know what achieves proven and sustainable impact. We have identified what it takes to strengthen the competitiveness of our customers. Therefore we support our customers in three strategic core areas.

Firstly, when finding optimal **Product Solutions**, that is in the evaluation and use of the best fastening part for the particular function intended in our customers' products.

Second, our **Assembly Technology Expert** services deliver the smartest solutions for all possible fastening challenges. Our services cover from the moment our customers developing a new product, to

assembly process optimization as well as fastening technology education for our customers' employees.

And thirdly, optimising our clients' productions in a smart and lean way with **Smart Factory Logistics**, our methodology, with intelligent logistics systems and tailor-made solutions.

Understood as a promise to our customers, "Proven Productivity" contains two elements: Firstly, that it demonstrably works. And secondly, that it sustainably and measurably improves the productivity and competitiveness of our customers.

And this for us is a philosophy which motivates us every day to always be one step ahead.

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