

Durafosf Plus® (Tungsten polymer coating)

Features:

Colour: grey / silver

coating structure
with tungsten

thickness
2-8 micron.

Advantages / benefits

- Anticorrosion protection in oiled conditions, up to 600 hours to fight the development of red rust (test in saline mist in compliance with DIN EN ISO 9227).
- Resistance to high temperatures up to 900 °C
- Galvanic isolation
- Friction reduced up to 0.1
- Lubricating properties guaranteed up to 900 °C

applications

- Rolls and balls for bearings
- Equipment of ovens and burners in close contact with sources of heat
- Bearings for burdensome uses at high temperatures
- Sliding parts of weapons





**PONTOGLIO
VINCENZA**
& C. s.n.c.

ILLUSTRATIVE DOCUMENT ABOUT THE FEATURES OF POST PHOSPHATE CONVERSION COATINGS

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DURAFOSF PLUS®

FEATURES

DURAFOSF PLUS® consists of a highly revolutionary electrochemical treatment of less than 0.3 micron (thousandth of a millimetre) nanoparticles and a TOP SECRET substance deposition able to drastically lower the friction coefficient of connecting surfaces.

After the application, ***DURAFOSF PLUS®*** creates a thin lubricating layer that can reduce the friction coefficient between two surfaces to as low as 0.01, a coefficient comparable to that one obtained by sliding two workpieces of ice over the other.

This layer is completely dry and adheres perfectly to the surface. Therefore, it is to exclude any possible lurking and contamination of the environment, such as in the case of oil or grease lubrication.

DURAFOSF PLUS® ensures the benefits as follows:

- It makes possible a dry and clean lubrication
 - It improves the break-in, even in combination with oil or grease lubrication
 - It protects against wear and, at low speeds, prevents the heavy advancement (stick-slip)
 - It allows life-long lubrication at high and low temperatures, under the influence of fluids, before ultraviolet radiation or in vacuum conditions
 - excellent corrosion protection
 - It facilitates the assembly and dismounting of coupling components with minimum tolerance values
 - in loosening couplings, it ensures defined tightening torque and relative preload values.
 - It makes possible cheap solutions using targeted application procedures
- This film acts as a separate and lubricating layer, with reducing effectiveness of friction and wear, between friction bodies that are in mutual contact.



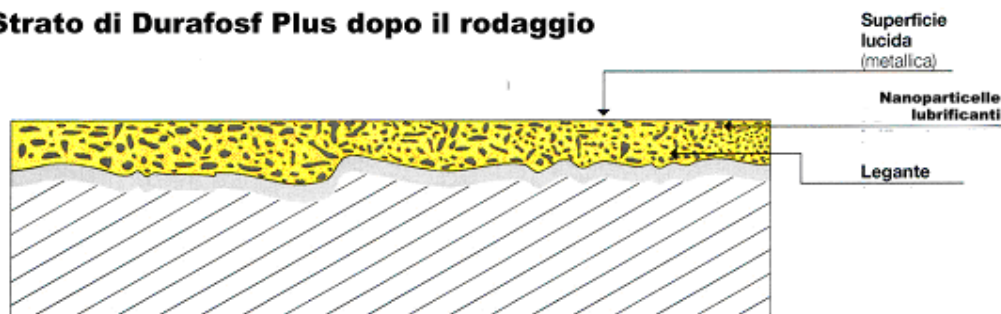
ILLUSTRATIVE DOCUMENT ABOUT THE FEATURES OF POST PHOSPHATE CONVERSION COATINGS

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DURAFOSF

Layer after the break-in

Strato di Durafosf Plus dopo il rodaggio



Other than the field of aerial and space navigation, ***DURAFOSF PLUS***[®] is often used, to a large extent, in small but important components such as, for example, magnets, sliding bearings and bench studs, safety belt components (locking systems, rollers), hinges, screws and bolts, valves, pistons, sliding guides, gaskets, rolling bearings, guides, bushings, bronzes, ball bearings, chains and many moving parts, ensuring a friction reduction of over 90%.

Laboratory tests showed the application of ***DURAFOSF PLUS***[®] treatment to the moving parts of a bicycle. It ensures an athlete's lower physical effort, in equivalent performance, consequently reducing the accumulation of lactic acid in the blood that results in the possibility of achieving higher performance.

In the case of frictional stresses a gradual transfer / removal of the lubricant layer occurs. You can also talk about transfer lubrication.

An oil added with nanoparticle, used to further enhance and exalt the benefits in terms of performance and duration offered by the treatment itself, also accompanies ***DURAFOSF PLUS***[®] treatment.



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This lubricant is made of active, corrosion-resistant nanoparticles, intermittent loads, vibrations. It reduces noise, and makes surfaces non-stick treated.

The lubricant also offers greater protection against atmospheric agents by forming an invisible, dry-to-touch film that obstructs the adhesion of contaminants on the mechanical members, preventing its operation.

FEATURES OF THE PRODUCT

Colour

Operating temperature

Length of operation in case of continuous motion, sliding track [m]

**Silver grey from
-50 a 1050 °C
1800**

Elasticity after flexion test, test performed with thickness of 7 micron

test passed

Adhesion after lattice engraving, DIN 53 151 Gt 0 Stick-slip

(heave movement) according to Tannert, 20 ° C,

Vmax=0,243 mm/s

**G0
no stick-slip**

Coefficient of friction according to Tannert, 20°C, Vmax=0,243 mm/s F=300N

0,03

Friction coefficient measured with pin / disk, 20 ° C, v=10 m/min, F=10N

0,05

Resistance to distilled water, test carried out with thickness of 7 micron truss, DIN EN 3026 [h]

500

Resistance to distilled water, test carried out with thickness of 7 micron truss, DIN 50 021, ISO 3768 [h]

400

Resistance to chemicals, test carried out with thickness of 7 micron truss, DIN 53 168 B

500

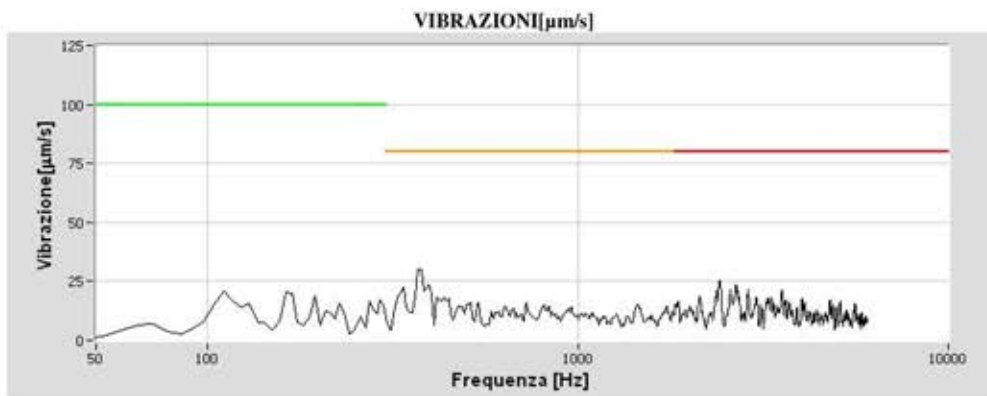
TEST CON TRATTAMENTO DURAFOSF PLUS

Informazioni generali

Data	25/09/2013 18.04
Modello	190007 (con trattamento DURAFOSF PLUS)
Velocità [RPM]	900
Numero di giri	5
Operatore	Butti

Risultati test vibrazione

	Low	Middle	High
Valori limite[$\mu\text{m/s}$]	100,00	80,00	80,00
Valori misurati[$\mu\text{m/s}$]	22,31	30,20	25,27



TEST SENZA TRATTAMENTO DURAFOSF PLUS

Informazioni generali

Data	25/09/2013 18.08
Modello	190007 (senza trattamento DURAFOSF PLUS)
Velocità [RPM]	900
Numero di giri	5
Operatore	Butti

Risultati test vibrazione

	Low	Middle	High
Valori limite[$\mu\text{m/s}$]	100,00	80,00	80,00
Valori misurati[$\mu\text{m/s}$]	55,31	70,77	26,22

