Vilab

MICROSLIDE

Tribological Coating

Metal Estalki's Molybdenum Disulfide MoS_2 tribological coating is ideal for space applications.

Key features

MoS_2 coating process for space applications

Coating Technology: PVD (Sputtering)

VILAB No. 57.406.1 - B: Steel, aluminium, titanium not anodized, strong ion etching

VILAB No. 57.406.1 – C: Anodised aluminium and titanium (electrochemically anodised), POM, weak ion etching

Customized service offering

In-house design and fabrication of holding tools

Advanced masking options

Demagnetization of iron parts

Ultrasonic cleaning

Plasma etching in the coating chamber

Storage and packaging according to regulations

Control – Thickness (XRF on the sample)

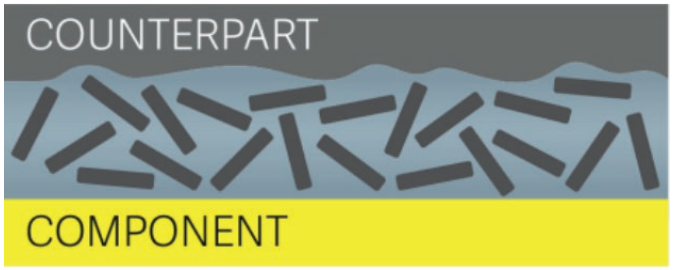
Tribo test at 97 % humidity (worst case)

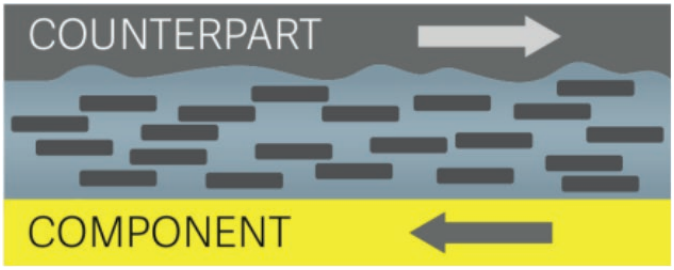
CoC with protocol, documentation, traceability guaranteed

Technical data

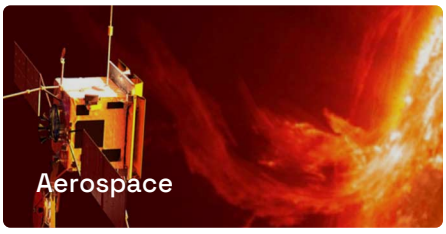
Chemical composition	Chemically pure MoS_2
Layer thickness	0.2 – 0.5 µm for ball bearings 0.5 – 1.5 µm for sliding parts and gears
Coefficient of Friction	0.005 (UHV) 0.15 (97 % humidity)
Temperature range of use	-260 to 350 °C
Specific wear rate	n.a.
Adhesion	Depends on the substrate (very good on metals, e.g. steel, Al, Ti, sufficient on plastic)
Nanohardness	5 to 10 GPa on high-speed steel
Structure	Hexagonal

ALIGNMENT OF THE MOS2 MICROSTRUCTURE PARALLEL TO THE SLIDING ORIENTATION AFTER RUN-IN PHASE





APPLICATIONS



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Metal Estalki, advanced PVD coatings