

# KANIFLON®

## The self-lubricating layer!

### What is KANIFLON®?

KANIFLON® is an internationally renowned brand name for a chemically precipitated nickel dispersion coat. By dispersion layer is meant a uniformly distributed incorporation of minute, non-metallic particles in the KANIGEN® matrix.

In KANIFLON®, additional unique properties are added to the excellent properties of the KANIGEN® base by the incorporation of about 20 vol.% PTFE.

### Total properties:

- Chemical resistance
- Reduced coefficient of friction
- Hydrophobic properties offer problem solutions in lubrication, friction, adhesion, wear and corrosion in almost all industrial sectors.

With KANIFLON®, you have a sophisticated system adapted to the current demand for innovative surface technology. Because, KANIFLON® is always in the process of advanced development spending tremendous time and effort.

Our technique guarantees uniform layer thicknesses even in strongly structured surfaces. Reproducible quality is another essential factor of our KANIFLON® technology.

With KANIFLON®, you are using the chemically precipitated nickel-PTFE layer with the longest experience worldwide.



**KANIFLON®** Significantly reduces adhesion. Protects from “seizing” in case of lubricant failure, against corrosion and pollution. Offers excellent dry operation and anti-adhesive properties. Arrests wear.



### The advantages:

#### Cost reduction

- Enables the use of low-quality base material
- Simplifies production, particularly in the area of chipping
- Offers optimum material combination possibilities
- Enables the recovery of the target state
- A uniformity and accuracy of layer up to  $\pm 2\%$  saves reworking
- High availability in terms of scarce resources

#### Quality enhancement

- Coating quality reproducible at the same level
- Competitive advantages by the increase in product quality
- High dimension accuracy of the KANIFLON® layer up to  $\pm 2\%$
- Product features are positively modified
- Reduces adhesion through its hydrophobic property
- Significantly reduces static friction
- Protects against “seizing” due to lubricant failure
- Protects against corrosion and pollution
- Arrests wear of the carrier material
- Offers excellent dry operation properties

#### Excellent long-term properties

The incorporated PTFE particles by its “depot” effect guarantee a 100% functionality of the layer till its complete removal.

### The properties:

#### Corrosion behaviour

As dispersion layer for specific application areas with problems of friction, adhesion and wear, KANIFLON® additionally offers an excellent corrosion protection. The attained test values are comparable with the values of our KANIGEN® method. By the incorporated PTFE, the values are consistently favourable.

#### Coefficients of friction

The low coefficient of friction of KANIFLON® is required if:

- Moving parts should guarantee their functions even after long downtimes
- Guidances, connections, joints, hinges, pistons, etc., rattle, jam, squeak, or tend to similarly undesirable occurrences
- The run-in period of components should be completed under easier, optimum conditions
- Lubrication systems are too expensive, too delicate, too maintenance-intensive, or not at all possible
- Lubrication systems have failed

#### Layer thickness

- Constant tolerance till  $\pm 2\%$
- Maximum limit 25  $\mu\text{m}$  in layer combination with KANIGEN®  $\infty$

#### Operating temperature

- Max. 250°C in application

#### Hardness

- In deposition state about 300 – 350 HV 0.05
- After heat treatment about 290°C about 400 – 450 HV 0.05

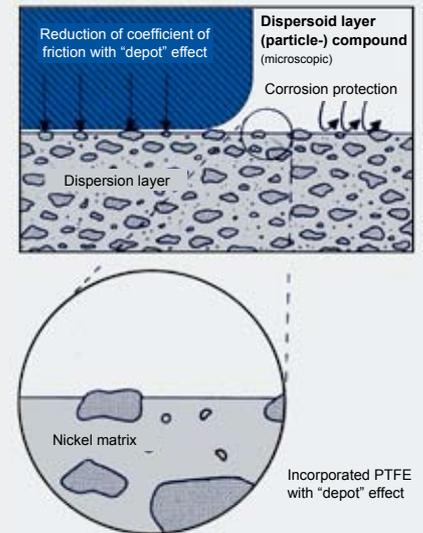
#### Specific weight

- About 7.85 g/cm<sup>3</sup>

#### Adhesive strength

- Up to 440 N/mm<sup>2</sup> depending on base material

#### Diagram of the multi-level structure and effect of the dispersion layer KANIFLON®



Our obtained practical values correspond to the general state of the technology and the specifications of DIN EN ISO 4527.

More details can be had from our technology brochure.



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