

SPACECOAT®

Noise Reduction Solutions

Innovation in Motion



DESCRIPTION

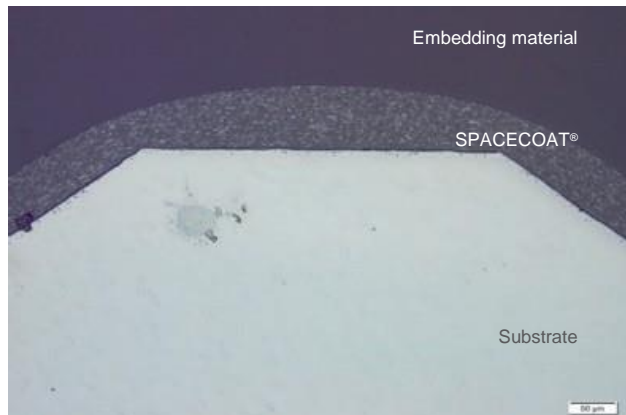
SPACECOAT® is an assembly coating specially developed for the motor industry for adjusting the backlash of gears. The special additive polymer layer enables simple, fast, inexpensive and precise assembly. It also allows backlash adjustments within very narrow tolerances, which significantly improves engine acoustics. The gear coated with SPACECOAT® is mounted with zero clearance against one or more meshing gears and fixed in position. During the engine cold test, coating abrasion results in optimized flank clearance.

DETAILS

The polyamideimide-based polymer layer also contains solid lubricants in the form of MoS₂ and graphite.

TYPICAL APPLICATIONS

Typical areas of application include intermediate gears in balancer shaft drives, camshaft drives and auxiliary components.



APPLICATION PARAMETERS

| | |
|----------------------------------|--|
| Substrate material | steel, aluminum, sintered parts and more |
| Component diameter | max. ~ 250 mm |
| Layer thickness (LT) | 10 – 70 µm |
| Layer thickness tolerance | ± 20% of the LT |
| Scope of application | partial or 360° coating possible |
| Surface roughness before coating | Rz > 0.3 µm |
| Process temperature | max. 125 °C |

ASSEMBLY

To achieve the necessary tooth flank contact, an actuator can be used to adjust the end position and preload force. It is also possible to replace the actuator with a spring built into the inner diameter. When the center distance changes, the spring takes over the adjustment of the end position and preload force.

LAYER BEHAVIOR AFTER ABRASION

The MoS₂ coating dissolves into extremely fine particles while the engine is idling.