



SILCOR®CrN, SILCOR®DLC, SILCOR®GR und SILCOR®Si-based Coatings

Requirements to Coating Goods

(In accordance with VDI-Guideline 3824 – Ch. 2 „Requirements on tools and components to be coated“)

1. Dimensions

- Standard size (L x W x H, maximum): 300 mm x 300 mm x 600 mm, mass 250 kg, larger on request

2. SURFACE AND MATERIAL (METALLIC COATING GOODS)

- Surface must be pure metallic (e.g., grinded, polished, eroded, blasted, lathed, milled).
- Surfaces must be free of corrosion and – if necessary – have to be preserved.
- Surface roughness should be as low as possible (usually around RzD 1 µm or less)
- All surfaces, bores and grooves must be free of burrs and chips - in particular, it must be guaranteed that blind bores are not blocked by chips, resin, pastes, etc.
- Coating of brazed parts requires vacuum and temperature resistant braze that does not contain cadmium or zinc. The soldering point must be free of cavities and flux agent residues.
- Screwed or pressed parts show outgassing in the vacuum, which can lead to coating delamination in the surrounding area.
- The coating of nitrided, oxidized, burnished, tempered or similarly treated surfaces is possible and requires additional effort. The adhesion of the coatings is significantly worse than on bare metal surfaces.
- Chrome or nickel plated parts can be coated. Sufficient adhesion of these layers to the base material and degassing must be guaranteed.
- The coating of parts with PVD coatings or other coatings is possible. If these parts were coated by third-party providers, no guarantee can be given for the liability of the entire coating system.

3. SURFACE AND MATERIAL (NON-METALLIC COATING GOODS)

- Ceramics and glass are suitable for coating. In dependence on the specific shape of the object the application of a metallic adhesion layer may be required.
- The composition of the specific glass or ceramics, its essential physical parameters as well as the auxiliary agents used must be specified.
- In principle, all plastic materials are suitable for coating. Due to the outgassing from these materials that occurs in a vacuum even below the softening temperature sampling is absolutely necessary.
- The composition of the plastic materials, any additives used (e.g. glass fibers) and the auxiliary materials used (e.g. release agents) must be specified.

4. DECLARATION OF THE COATING GOODS

- Designation of the tool or component, its function and specific conditions of use
- Exact information about the material (in the case of metals, the material number according to DIN or ISO is preferred)
- In the case of heat treatment applied: Temperature, hardness, others
- Special surface treatments (e.g. highly polished, nitrided, coated etc.)
- Information on possible residues from processing - e.g. release agents, lubricants, fluxing agents and oils, polishing paste, oxide layers.
- The use of additives and preservatives containing silicone must be stated separately.
- Drawing or sketch referring to the areas that are to be coated or that may not be coated and the preferred layer thickness.
- Maximum deposition temperature which can be applied.

5. PACKAGING

- The coating goods must be delivered in suitable packaging. The respective parcel service or truckage company will provide information about the packaging requirements. Many parcel services, for example, require the packaging to protect the contents in the event of a fall from greater height. This does not only require externally stable packaging, but also sufficient padding inside to protect against knocks or pressure.
- The packaging material must be dust-free inside!
- The packaging must be suitable for return shipment by parcel service or forwarding agent. In the case a new packaging is required by PT&B, this will be charged at cost.

6. QUALITY ASSURANCE

- By accepting the offer and sending the coating goods to PT&B, the customer confirms that the goods are in perfect condition in accordance with the manufacturing documents provided.
- A detailed inspection of incoming goods by PT&B takes place if the package shows obvious transport damage. This is free of charge for the customer. In the case the packaging is inadequate and there is a risk of transport damage of the coating goods (without visible damage of the package), the costs for the inspection will be charged.
- In general, a visual check of the coating goods is carried out by PT&B. If damage or faults are detected in the coating goods, these are documented as a notice of defects and sent to the customer. The customer shall bear the costs incurred as a result of the notification of defects.
- There is the option of ordering a detailed quality control of the incoming coating goods and the coating (including documentation) for the respective coating job. This detailed inspection will be invoiced according to the effort involved.