

Powder coating quality requirements

1. General

This document defines the visual and technical quality criteria that powder-coated parts must meet.

General criteria:

- All parts must be evenly coated without visible defects.
- The coating layer must have the appropriate thickness: (e.g. 60–80 µm). If a primer is applied, a thicker layer is required (starting from 120 µm). If the material already has a zinc layer, this thickness must also be taken into account.
- Inspection is carried out from a distance of 1–2 meters.

Note! If the acceptability of a defect depends on its location, defects found in the visible area are treated more strictly. Where a defect that would be acceptable elsewhere significantly impairs the product's aesthetic appearance or causes visual disturbance, it is considered non-compliant even if technically permissible elsewhere.

2. Permissible Deviations (to a limited extent)

| Type of defect | Permissible extent |
|--|---|
| Small defects (dust particles, hairs, bubbles, etc.) | Maximum 2 spots / m ² , diameter up to 0.3 mm |
| Orange peel effect | Slightly perceptible, if it does not affect functionality or appearance |
| Uneven coverage | Only in areas with minimal visual impact (e.g. hidden surfaces) |

3. Non-Permissible Defects

| Type of defect | Description/Example |
|--|--|
| Runs and drips | Paint accumulations clearly visible |
| Large defects (dust particles, hairs, bubbles, etc.) | Spots > 0.5 mm or more than 2 spots / m ² |
| Uncoated areas | Any areas where metal is visible or coating is insufficient |
| Cracking, peeling | Separation of the paint layer |
| Grease, oil or silicone residues | Insufficient surface preparation |
| Mechanical damage | Scratches, dents, cracks, or defects caused during transport |
| Color deviation | Noticeable tone difference within the same product |
| Glossy surface | Insufficient heating |