

Definition of a powder coating system

A powder coating system is defined by:

- the substrate – either aluminium(alloys) or hot-dip galvanized steel,
- the weather resistance:
 - one year Florida, resp.
 - three years Florida, resp.
 - five years Florida,
 - for primers weather resistance is not necessary,
- systems with the same basis chemistry (resin-/hardener combination).
- For systems to be newly approved all colour shades must be without formulas which require the identification with a T according to EU law (i.e. TIGIC, lead, chromate in all colour shades),
- the desired colour group: only a certain colour group to be defined, or all unicoloured shades or all colour shades including metallics,.
- the aspect: untextured or textured,
- the curing conditions: minimum and maximum times at three object temperatures (changes principally require a new approval test),
- the gloss within the mentioned 60° gloss range:
 - untextured powder coatings: max ± 15 at > 40 points and max. ± 10 at < 40 points degree of gloss (the tolerances of individual colour shades are max. ± 10 , respectively ± 7 points)
 - textured powder coatings: ± 30 at ≥ 40 points and ± 20 at ≤ 40 points (the tolerances of individual colour shades must be max. ± 20 , respectively ± 14).

Note: Concerning textured powder coatings the visual impression is more important than the reflectometer value.

Further provisions:

- Only one material license is necessary within one system.
- Upon request of the material manufacturer, a system can be produced in different companies, provided it is produced with the same recipe (a legally binding confirmation is necessary). If a system or colour shade is blocked, this affects all production plants.
- Multi-layer structures of registered systems are allowed, i.e. they do not require a new admission test. Multi-layer structures, which contain systems without approval, need an individual material license by testing the total structure. The admissible layer thickness of multi-layer systems may be different from the common thickness (50 – 120 μm) and has to be agreed upon.
- If covering multi-layer structures of systems with different classes of weather resistance are combined, the criteria of the top coat apply. Concerning transparent multi-layer structures of systems with different classes of weather resistance, the lowest classification is applicable, in case no separate test is available.