



**What does "GSB quality"
actually mean?**

© 2021 GSB International e.V.
Fritz-Vomfelde-Straße 30
D-40547 Düsseldorf
Phone +49 (0) 211 - 47 96 - 450 / - 451

What does "GSB quality" actually mean?

GSB International assures the quality of coatings using coating powder and liquid paint for components made of aluminum, steel and galvanized steel for architectural applications and for industry.

The requirements prescribed in the GSB quality regulations not only correspond to those of international standards, but are usually issued in a more stringent manner. The most important quality feature is the overall view and continuous monitoring of the entire process chain, from pretreatment to the coating material (coating powder or liquid paint) and finally to the coating company.

GSB-compliant pretreatment processes and GSB-approved pretreatment chemicals and coating materials are mandatory for a GSB-compliant coating. Furthermore, it is essential that the coating is performed by a GSB-certified coating company. Consequently, it is by no means sufficient to "only" use GSB-approved coating materials for a GSB-compliant coating.

With surface preparation and pretreatment, we come to the first step in the process chain. Depending on the substrate GSB-certified coating companies use:

Steel: Blasting, iron or zinc phosphating

Galvanized Steel: Chromating, chrome-free & chrome-VI-free chemical pretreatment, sweeping, zinc phosphating

Aluminium: Chromating, chrome-free & chrome-VI-free chemical pretreatment, pre-anodization

The chemical chrome-free respectively chrome-VI-free pretreatment processes are also referred to as "alternative pretreatment processes". Chemicals for these processes must be approved by the GSB.

For the initial approval process, samples (e.g. aluminum profiles) are pretreated with the appropriate pretreatment chemical and coated according to GSB quality regulations. After laboratory tests, they are then stored in an outdoor weathering stand in Hoek van Holland, i.e. exposed to weathering (preliminary approval), in order to test the adhesion of the powder or liquid coating and the correlating corrosion protection of the substrate in this extreme combination of sea and industrial climate. If the samples meet the strict GSB requirements after 3 years of exposure, the pretreatment chemical, in the case that it is used by GSB-certified coaters, receives its final GSB approval. The samples then remain at the outdoor weathering stand and are re-evaluated after 5 and 10 years. Through this long-term observation, which goes far beyond the common industry standards, GSB gathers experience and certifies the fulfilment of the parameters specified in the quality regulations after the respective extended storage period. In addition to the initial approval, the pretreatment chemicals are obligated to undergo an annual prolongation test. Extensive laboratory tests are also carried out for this purpose, as was already the case for the initial approval. The special feature here is that the samples for the prolongation test are not submitted by the manufacturers of the chemicals, but are taken at a GSB-certified coating plant under real production conditions.

For the second step of the process chain, the coating materials also require GSB-approval. For this purpose, test sheets are coated with the to be approved coating powder or liquid paint by an independent accredited testing institute on behalf of GSB in accordance with the GSB quality regulations. In the laboratory of the testing institute, the samples are put through extensive tests on technological and anti-corrosive properties. After passing these laboratory tests, the coating material receives a preliminary GSB approval. This is also followed by an outdoor weathering test to check the UV-resistance. The test is carried out in the US state of Florida on an ISO 17025-certified weathering stand. Depending on the quality level, the test sheets are stored there for 1, 3, 5 or even 10 years. After the targeted aging period, only materials that show a residual gloss of at least 50 % and color consistency within certain tolerances according to the GSB specifications – with adequate cleaning – receive the final GSB approval, which results in one of the prestigious GSB Quality Seals. The quality of the coating materials is also continuously monitored. With the aim of maintaining the GSB quality seal, test sheets coated with different colors of the coating powder or liquid paint are thoroughly tested in the laboratory every year and then sent to Florida for outdoor weathering.

Last but not least, the coating companies that carry the GSB Quality Seals are also inspected. Unannounced audits are carried out at least twice a year by an independent accredited testing institute on behalf of the GSB. The tests are carried out to determine whether the companies adhere to the comprehensive specifications of the GSB quality regulations and whether their coated test sheets meet the GSB specifications. Furthermore, the external inspectors take samples for corrosion tests, to evaluate the result of the chemical pretreatment and the coating of the company, for example. In addition, every GSB-approved coating company must carry out and document a wide-ranging **F**actory **P**roduction **C**ontrol (FPC). Such documentation is also checked as part of the audit process. The special attribute here is that GSB classifies not only the coating materials (Florida 1, 3, 5 or 10) but also the coating companies (Standard, Master, Premium; additional seals: Sea Proof and Sea Proof Plus).

This comprehensive quality control ensures that optimum coating quality is the final result of every order. Furthermore, the different quality levels enable one to find the optimum coating for a wide range of conditions, taking into account the highest quality requirements in architecture and industry.



© 2021 GSB International e.V.
Fritz-Vomfelde-Straße 30
D-40547 Düsseldorf
Phone +49 (0) 211 - 47 96 - 450 /
- 451

info@gsb-international.de
[Contact Form](#)
[Imprint / Privacy Policy](#)
[Committees](#)
[Links to Testing Institutes and Cooperation Partners](#)