

RAL quality mark: tested quality that exceeds the standard

The RAL quality mark—why is it more than just meeting a standard?

When purchasing PVC windows, customers want to be sure they are getting durable, high-quality, and reliably manufactured products. While there are European standards that specify certain requirements for windows and window profiles, these primarily define the basic minimum technical requirements^{*1}. The RAL quality mark^{*2} goes a step further.

What does the RAL quality mark mean?

The RAL quality mark for PVC window profile systems is awarded only to companies whose products are regularly tested and monitored. Testing is not a one-time event; rather, quality is continuously monitored—both by the manufacturers themselves and by independent testing institutes.

What advantage does this offer to window buyers?

Consistently high quality^{*3}

- Regular testing ensures that materials, profiles, and production processes consistently meet high standards. Quality is traceable not only during type testing but throughout the entire production process.

Durable windows^{*4}

- Quality-assured windows and window profiles are tested for their resistance to weather, aging, and performance.
- This helps ensure that windows continue to function reliably and look good even after many years.

Sustainability through controlled use of recycled materials^{*5}

- Recycled materials may be used, but they must meet clearly defined quality requirements.
- This combines sustainability with high product quality.

Greater safety and trust^{*6}

- Regular inspections by independent bodies ensure transparency.
- Customers receive objective proof that quality is not only promised but also verified.

Standard met—and then what?

The standard specifies the minimum requirements a window profile must meet. The RAL quality mark indicates that quality is continuously monitored, independently tested, and consistently secured.

For end customers, this means:

greater confidence, longer-lasting performance, and greater peace of mind when choosing their windows.

***1 Standards for windows and window profiles**

EN 14351-1 is the “product standard” for windows and exterior doors, which lists a wide variety of tests for windows. The standard does not specify any minimum requirements (e.g., for airtightness).

EN 12608-1 is the standard for PVC window profiles. The standard is considered met if the manufacturer declares that it complies with it.

***2 The RAL quality mark**

RAL GZ-716 is the RAL quality assurance standard for the plastic window system. All variants of the window system are tested by independent testing institutes and their high performance is regularly confirmed.

RAL GZ-695 is the RAL quality assurance certification for the window manufacturer. It covers the assembly of the window and installation and also requires minimum standards and regular internal and external inspections.

***3 Consistently high quality**

The quality of a PVC window begins with material monitoring. Inspections are conducted continuously by the manufacturer and regularly by external auditors (third-party audits) to assess the materials used (e.g., weather resistance, strength), profile manufacturing (e.g., dimensional accuracy, color), and the production process (e.g., tests to be conducted every 4 hours, once per shift, or daily). All these requirements are specified in the “Technical Appendix” to RAL-GZ 716.

***4 Durable windows**

According to the table from the Federal Institute for Research on Building, Urban Affairs, and Spatial Development (BBSR), PVC windows have a service life of more than 50 years.

Quality-assured plastic profiles must continuously pass weathering tests that simulate a hot European climate. Part of the “system tests” for a window system includes, among other things, the long-term performance test according to EN 1191, which requires that the window remain fully functional even after 10,000 opening and closing cycles. Another example is the driving rain test, in which a window must remain watertight even under heavy rain and wind pressure. These tests are always conducted on test windows that are as critical as possible (large, heavy).

***5 Sustainability through the controlled use of recycled materials**

Both offcuts from profile and window production and old, removed PVC windows are valuable raw materials that are reprocessed into the inner core of new PVC windows. REWINDO GmbH and the “Technical Appendix” (to RAL-GZ 716) define requirements for recycled material quality, as well as the manner in which secondary materials are used in a new profile. A profile or window, with or without secondary materials, naturally meets the same requirements.

***6 Greater safety and trust**

The two quality guidelines, RAL GZ-716 and RAL GZ-695, as well as all other RAL quality guidelines, have one thing in common: Quality assurance is based on 1) type testing, 2) in-house production control, and 3) external monitoring by independent testing bodies. The RAL quality mark is awarded by a so-called “Quality Committee,” which verifies that all conditions for awarding the mark have been met. An annual review is conducted to ensure that the conditions for the award continue to be met.