

## Frequently asked questions Cradle to Cradle® (C2C)

### 1. What is Cradle to Cradle (C2C)?

Cradle to Cradle describes the circulation of materials in closed and potentially infinite cycles. In essence it is about materials no longer turning into waste, but all constituent materials serving as nutrients for biological or technical cycles after they have been used. This requires all materials to be toxicologically harmless – and product design that anticipates the separability of components. In other words, Cradle to Cradle is the scientific basis for the implementation of the circular economy in the construction sector.

### 2. Why is a C2C-certification worth it?

The Cradle to Cradle Products Innovation Institute (C2CPII) in San Francisco has created a holistic evaluation system for developing, assessing and certifying products that meet the C2C requirements. As the demand for building certifications (LEED, BREEAM, DGNB) has steadily grown in recent years, so too has the requirement for sustainable materials and products. C2C is a product certification, i.e. independent confirmation of the quality of a product. Among other things, the certificate is valid as proof of compliance with harmful emissions during installation, usage and dismantling, and can be used as proof in specifications for tender which require sustainability. C2C-certified products can already be credited under LEED, BREEAM and DGNB.

For the EU, transforming the European economy into a circular economy is a key strategy for the future. It has been promoted since 2015 with the Circular Economy Package. Certified recyclable products will therefore become significantly more important in the future, for example in public tenders.

### 3. How does a certification work?

The certificate is awarded by the independent Cradle to Cradle Product Innovation Institute (C2CPII) in San Francisco. To this end, Schüco must prove that all the requirements of the certification standard have been adhered to, and comprehensively document this and provide the corresponding certificates and measurements as proof. All documents are submitted to the certification body for a conformity check. Only if all the requirements are met is the certificate awarded. In addition, re-certification is required every two years.

As the test of the constituent materials reaches far into the supply chain and closely examines the material composition down to 100 ppm (0.01%), the suppliers and subcontractors need to be involved. Suppliers can safeguard their business secrets (e.g. production processes) by protecting confidential information with a non-disclosure agreement (NDA). If materials which do not comply with the strict requirements of the C2C standard are found, they must be substituted. This product optimisation process is an important part of C2C certification.

For the auditing, optimisation and the whole certification process, Schüco works with EPEA Internationale Umweltforschung based in Hamburg, and Drees & Sommer.

#### **4. What is the difference between general recycling and C2C recycling?**

The recycling that is carried out today is generally “downcycling.” This means that materials lose technical quality during the recycling process. For example, window glass is not currently recycled into high-quality window glass. It is usually turned into container glass or another inferior product until it finally ends up as landfill. Mineral waste is turned into road foundations instead of being re-used for walls and foundations. By contrast, the aim of recycling according to the Cradle to Cradle principle is for all materials to be able to circulate at a consistent quality. This permanently preserves the value that is created in manufacturing and finishing processes.

In addition to the C2C initiative, Schüco is therefore actively involved in the A/U/F recycling initiative to improve the material cycle in window and façade construction for the long term.

#### **5. How is it different to other labels?**

In contrast to business-related certificates such as ISO 14001 (environmental management) or building certificates such as DGNB (German Sustainable Building Council), Cradle to Cradle certification relates to a specific product. According to ISO 14024, C2C certification is a Type I environmental declaration, comparable to the Blaue Engel (“Blue Angel”) or natureplus. This means that set criteria are examined and verified by external experts and the results are communicated via the label as qualitative and verifiable information, in this case as a Basic, Bronze, Silver or Platinum certification level. In contrast to an EPD (Environmental Product Declaration), which is a Type III environmental declaration that can be issued for any product, C2C certification is only awarded to products which adhere to the high C2C standards for material health and recyclability as well as energy, water and social requirements.

#### **6. What support is available when using SchüCal?**

The SchüCal design, calculation and ordering software already allows you to easily check whether Schüco products are C2C verified. With just a few clicks, you can find out whether the configured unit is C2C compliant. The verification is always based on the existing certificates for individual products and modular systems.

#### **7. What can I do if my planned system is not yet C2C Certified?**

If a C2C certification is required on a project and the planning does not permit a solution with C2C-compliant products, there is an option for individual certification. This costs money and takes time. There is less expenditure for special constructions made of aluminium profiles, as the standard aluminium systems from Schüco are already certified. Please contact us for more details.