ENVIRONMENTAL DECLARATION
IN ACCORDANCE WITH ISO 14025

Background

It is considered holistically and over the whole lifecycle of the building. This includes:
- the consumption of resources and energy during the production of the building materials
- environmental and contamination effects
- sustainment efforts
- ability to be dismanteled
- recycling processes

In order to be able to assess the sustainability of building projects in such a holistic way, the construction products used must be certified in accordance with the IBU (German Institute Construction and Environment IBU e.V.) ISO 14025 Environmental Declaration.

Main factors of influence:
- primary energy (renewable / nonrenewable)
- greenhouse potential / ozone depletion potential / acidification potential
- eutrophication potential (overfertilization of water)
- sommer smog potential

Kaldewei is the first german bathroom fixtures company to be awarded the IBU certificate in 2009

General statements of the declaration

- Steel is easy to recycle. The usage of steel as a recycling material contributes to the saving of resources. There is no use of “downcycling”.
- Kaldewei products can be 100 % recycled and do not require the further separation of steel and enamel, so that the down-cycling required for many other materials can be avoided.
- downsizing and renaturation does not cause any environmental pollution
- Used bathtubs and shower trays are not waste. In case you want to dispose it, you can treat it a normal construction waste (no special waste).

Eco-balance Kaldewei steel enamel

- life cycle analysis includes the phases of life „from the cradle to the factory gate“ as well as the recycling potential
- the certification procedure also assesses the winning of the base materials, the production of preliminary products and other raw and auxiliary materials
  - production of steel bathtubs and shower trays
  - production of enamel
  - necessary supporting and packaging material
  - transportation of main material and auxiliary materials
  - company operating (energy consumption, waste, emissions)
  - disposal of waste
  - recycling potential
- the usage itself is not included in the declaration
RESULT ECO-BALANCE
STEEL ENAMEL VS. ACRYLIC

Energy consumption
- Steel enamel: 187
- Acrylic*: 229

Overfertilization of water
- Steel enamel: 257
- Acrylic*: 250

Global warming
- Steel enamel: 196
- Acrylic*: 136

Acid rain
- Steel enamel: 203
- Acrylic*: 304

*Data are from the WECOBIS ecological building material information system and have been obtained from a conventional enamelled cast iron bathtub with apron. The database does not provide data for the eutrophication potential so an estimate was used here.

RESULT LIFE CYCLE ASSESSMENT
STEEL ENAMEL VS. CAST IRON

- Energy consumption
  - Steel enamel: 257
  - Cast iron*: 250

- Overfertilization of water
  - Steel enamel: 250
  - Cast iron*: 250

- Global warming
  - Steel enamel: 203
  - Cast iron*: 304

- Acid rain
  - Steel enamel: 203
  - Cast iron*: 304

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- In aspects of ecological and economical purposes the material steel enamel is superior.
- The results show that the contribution to sustainable building is much bigger when choosing a Kaldewei product than any alternative material.