

KALDEWEI

THE MATERIAL





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THE MATERIAL

SPECIAL STEEL

- Each day, KALDEWEI consumes 300 tons of 2,9 mm strong titanium reinforced, low-carbon steel
- strong, tough, robust, optimal ductile
- The most reliable and genuine partners:
Arcelor Mittal, ThyssenKrupp and Voest Alpine



ArcelorMittal

ThyssenKrupp



voestalpine



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KALDEWEI ENAMEL

- Hardly any other material has so many advantages in the bathroom as glass
- Glass is highly resistant to chemical or thermal stress and has an excellent appearance
- Masterfully produced in-house: Californian borax, quartz, Scandinavian feldspar and soda. KALDEWEI uses these natural materials to produce a special enamel coating based on its own formula – KALDEWEI Enamel

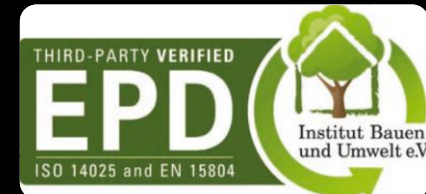


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KALDEWEI STEEL-ENAMEL

- Steel and glass: two entirely authentic and natural materials, used for centuries, and each with its own inherent material properties
- KALDEWEI Steel-Enamel combines the strength and design quality of steel with the hardness and chemical resistance of glass to a homogeneous form – glazed steel made by KALDEWEI

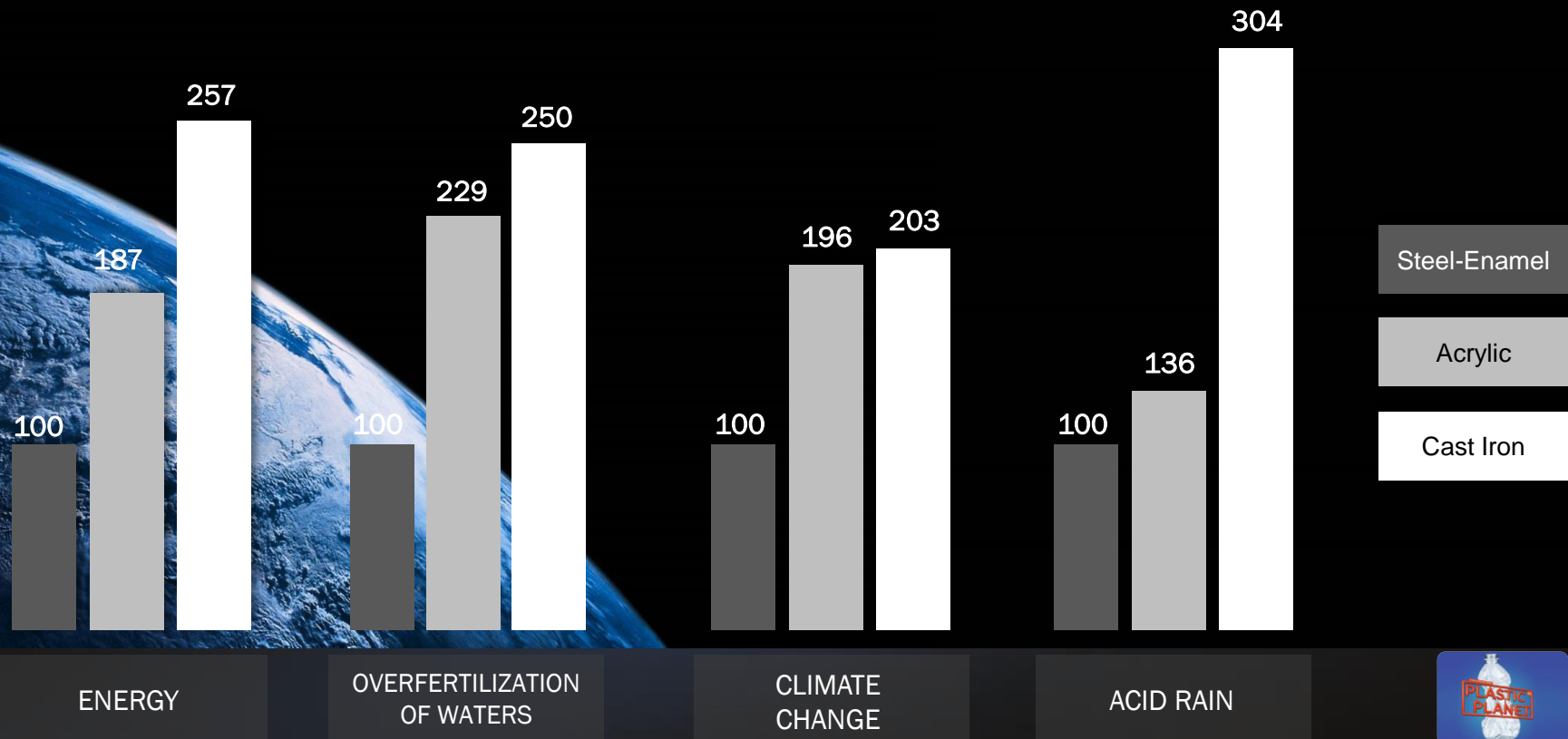


ECOLOGICAL SUSTAINABILITY

- KALDEWEI has stood for outstanding design, superior quality „made in Germany“ and ecological sustainability for more than 90 years.
- KALDEWEI was the first bathroom manufacturer to be certified sustainable to ISO 14025 and EN 15804 by the Institut Bauen und Umwelt e.V., the Institute of Building and the Environment.
- 100% natural - 100 % recyclable. Thanks to the environmentally compatible procedures used in manufacture, packaging, transportation and disposal, KALDEWEI shows an exemplary environmental balance sheet. This makes KALDEWEI products particularly interesting for ecological, sustainable building projects.

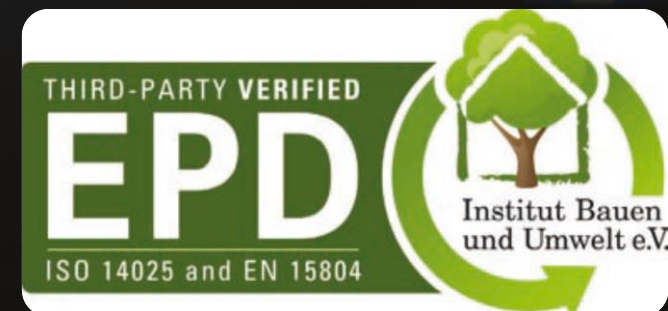
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ECO-BALANCE RESULTS

- The Environmental Product Declaration (EPD) informs about the ecological impact of products over the whole life-cycle - „from the cradle to the factory gate“ as well as the recycling potential
- Being considered holistically, it includes the consumption of resources and energy during the production of the building materials, environmental and contamination effects, sustainment efforts, ability to be dismantled as well as recycling processes
- The results show that Kaldewei steel enamel 3.5 mm contributes considerably more to sustainable building than acrylic or cast iron





ECOLOGICAL SUSTAINABLE

- Re-Cycling : From one life-cycle into another– a true cycle
- Like this we transform an „old“ steel-enamelled bathtub into...

1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Nichts für die Wegwerfgesellschaft.

Die Abfallberge und ihre Entsorgungsprobleme wachsen aus über den Kopf. Höchste Zeit, sich wieder auf blühende Weite zu bewegen.

Badevarianten von Kaldewei haben nicht nur hohen historischen Wert, sie überzeugen vor allem durch extrem lange Lebensdauern. Dafür gibt es einen soliden Grund: 3,5 mm starkes Stahl-Email. Ein Material, das allen Belastungen des Bedingungs trüffig standhält. Mit Farben, die durch die tägliche Reiberei nicht verbleichen. Und einer Oberfläche, die durch besondere Widerstandsfähigkeit glänzt. Auf die ungeliebten Glanz finden Badreiter gar nicht. Keine Haftung, und das ist gut für Ihre Gesundheit und unsere Umwelt. Denn je pflegeleichter eine Wanne, desto weniger Reinigungsmittel, desto weniger Schadstoffe in Grundwasser.

Aber, Badevarianten aus Stahl-Email sind nicht nur leicht zu pflegen, sie sind auch hart im Nehmen. Darauf gibt Kaldewei eine Garantie, die sich gewonnen hat: 50 Jahre.

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KVIDEMES

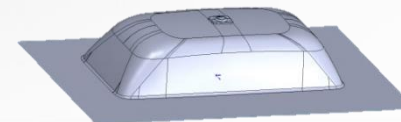
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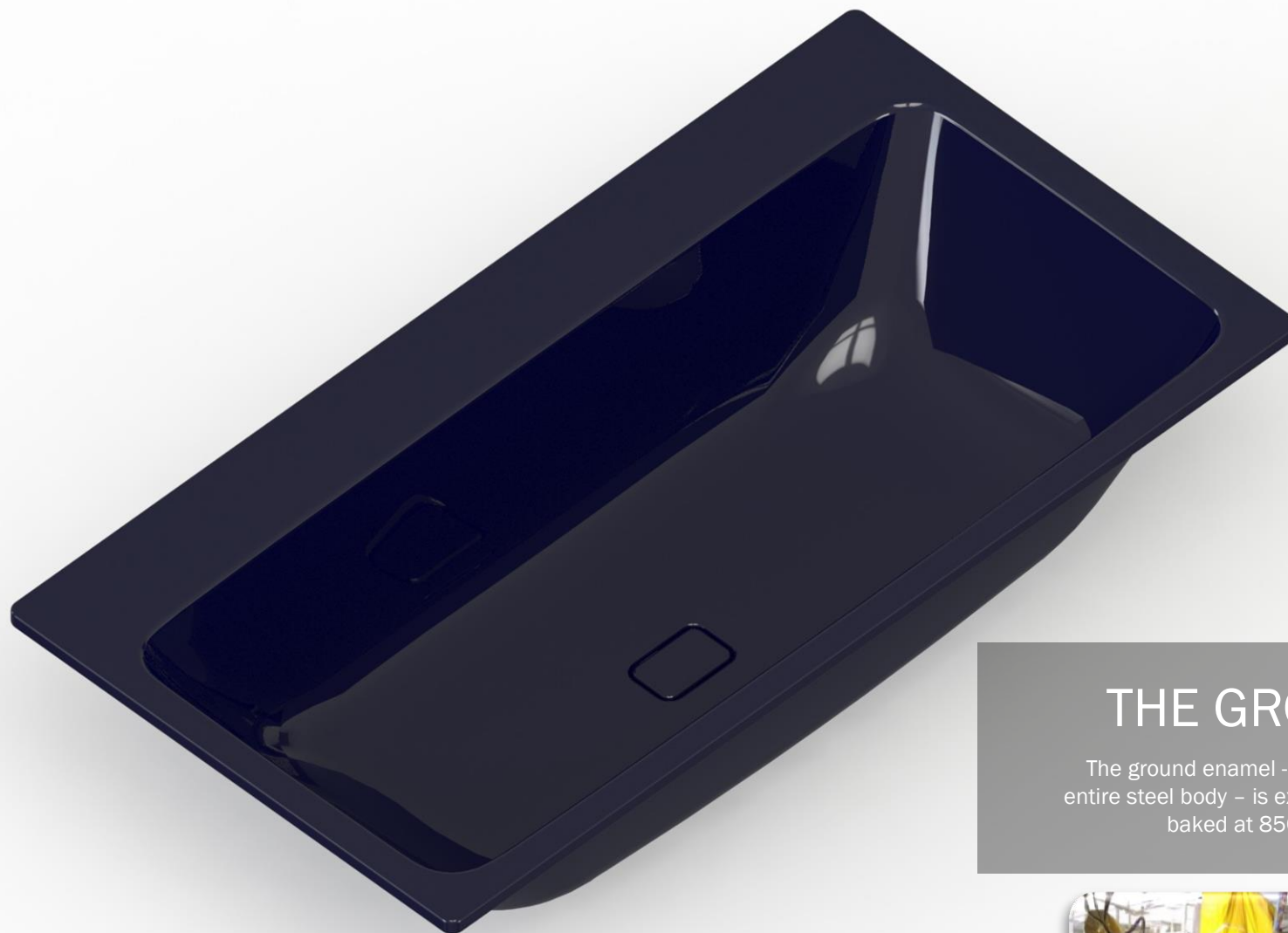
THE BLANK

Hydraulic deep-drawing presses shape the 2,9 mm steel sheet with more than 1000 tons pressure in a cold deformation



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THE GROUND ENAMEL

The ground enamel - the first glaze layer surrounding the entire steel body - is extremely thin. Automatically applied, baked at 850 degrees, inextricably connected in typically dark-blue steel-enamel



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THE COVER ENAMEL

The coloured artistic enamel is applied on the visible face of the bath and then again baked at 850 degrees.



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In SUM

totally INCOMPARABLE

KALDEWEI STEEL-ENAMEL



HEAT CONDUCTOR



HEAT RESISTANT



CHEMICAL RESISTANT



UV-RESISTANT



SCRATCH RESISTANT



IMPACT RESISTANT



EASY-CLEAN



HYGIENIC



UNIFORM APPEARANCE



STYLE ICON



30 YEARS GUARANTEE



SUSTAINABLE

KALDEWEI

THE MATERIAL



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SCRATCH RESISTANT

- Enamel is very hard (Mohs category 7) – even harder than steel
- If metal rubs on enamel, the metal rubs off; the enamel is unaffected
- Thus, KALDEWEI steel enamel is much more wear resistant than acrylic and highly resistant to mechanical stress
- Children can play, dogs can be washed and even heavy duty spring cleaning leave no marks on the glazed KALDEWEI surface



HEAT RESISTANT

HYGIENIC

SCRATCH RESISTANT

IMPACT RESISTANT

EASY TO CLEAN

MOHS'S HARDNESS SCALE (1811)



Friedrich Mohs

Hardness	1	2	3	4	5	6	7	8	9	10
Material	Talc, candles	Plaster-board – Plaster	Plastics, paint	Marble	Iron	Steel	Enamel, porcelain, glass	Topaz	Sapphire	Diamond
Wear resistance	1-2 very low		3 low	4 adquate	5-6 good		7 very good	8-10 exceptionally good		

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HEAT RESISTANT

HYGIENIC

SCRATCH RESISTANT

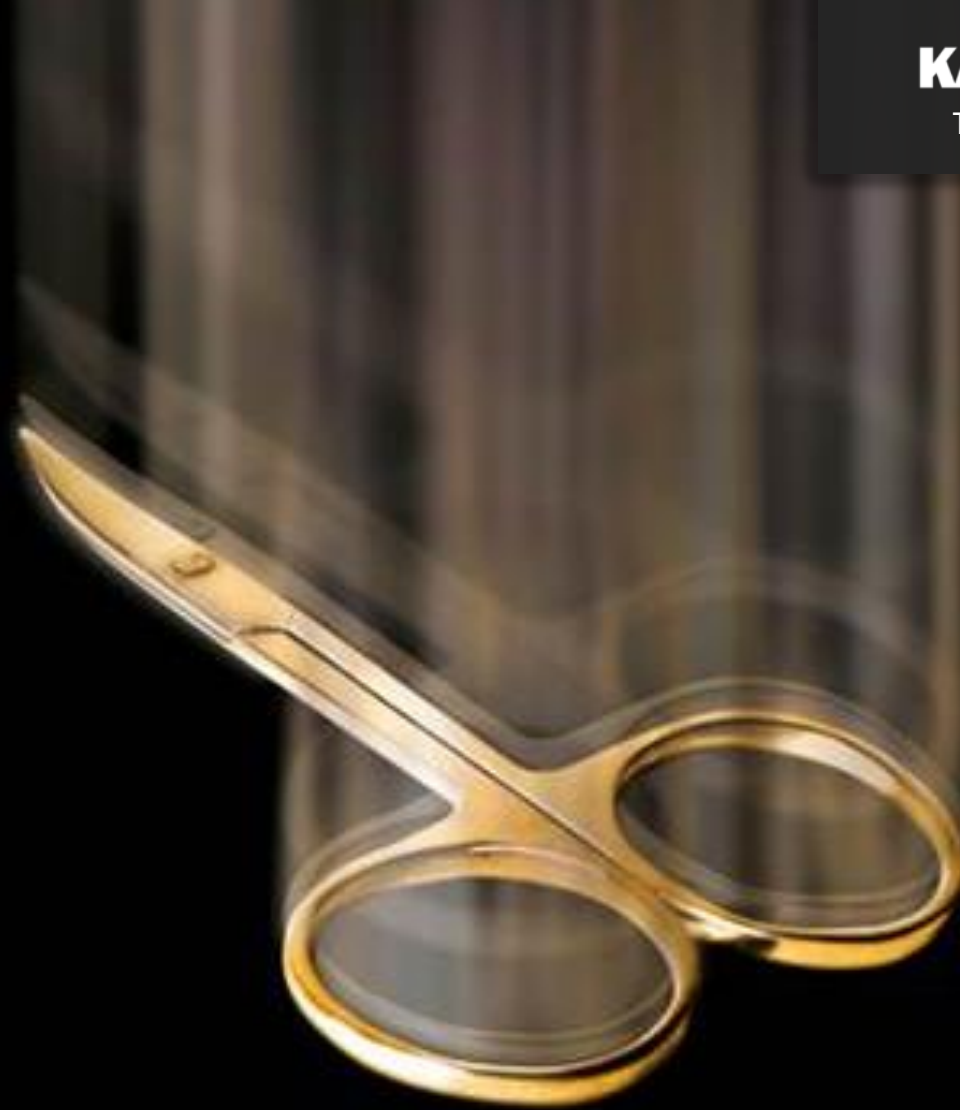
IMPACT RESISTANT

EASY TO CLEAN



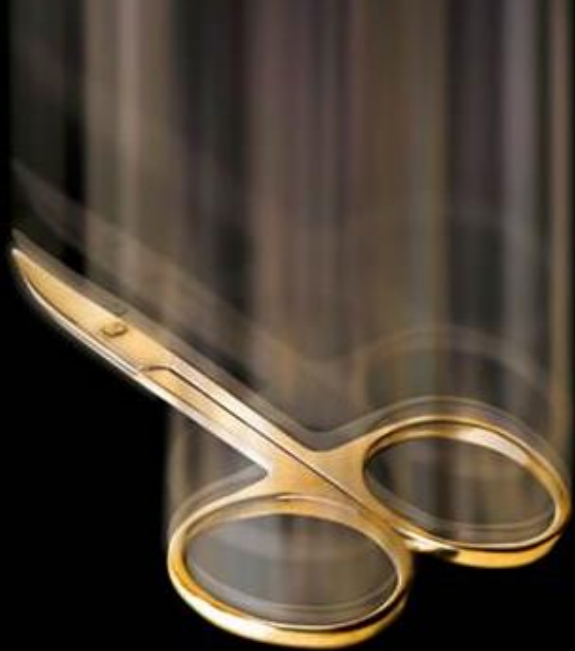
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IMPACT RESISTANT

- KALDEWEI enamel is ultra thin and flexible. Like this it prevents falling objects damaging the surface
- Robust and resistant to knocks, almost no normal object in the bathroom can damage the surface
- This is proved by DIN ISO 4532 („pistol test“)

HYGIENIC

SCRATCH RESISTANT

IMPACT RESISTANT

EASY TO CLEAN

CHEMICAL RESISTANT



High quality steel enamel is characterized by:

- **super thin enamel layers:**
 - the thinner the better: $\leq 0,2 \text{ mm}$
- **homogenous enamel layers:**
 - the more even the better: tension-free surface
- **strong steel base:**
 - the thicker the better: 2,9 mm thick steel

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ACID- AND CHEMICAL-RESISTANT

- KALDEWEI steel enamel is resistant to all cosmetic and medical bath additives and perfumes that are tolerated by human skin
- Not even hair dyes, nail polishes or common household detergents will leave a mark on it
- The proof: DIN ISO 2722, class AA, the highest value grade

PACT RESISTANT

EASY TO CLEAN

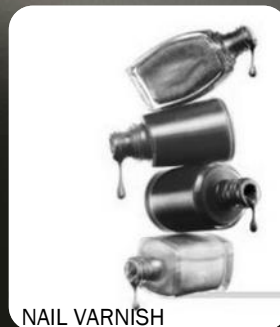
CHEMICAL RESISTANT

HEAT RESISTANT

HYGIENIC



HAIR TINGING LOTION
& COSMETICS



NAIL VARNISH



ACETONE



DETERGENTS



Vitreous
TEST TUBE

A matchstick is lit, with a bright orange and yellow flame at the bottom. A thick, translucent blue smoke plume rises from the flame, curling and expanding as it goes up. The background is solid black, making the flame and smoke stand out. In the top right corner, there is a dark grey rectangular box containing the text 'KALDEWEI' in large, bold, white capital letters, and 'THE MATERIAL' in smaller, white capital letters below it.

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HEAT RESISTANT

- Burn marks on flushing tanks left from cigarettes? Deformations and stains caused by hot tea lights or candles? Toxic vapours? Not possible on glass.
- After all, the coating is melted into steel at a temperature of 850°C.
- Hence, KALDEWEI enamel is highly heat resistant

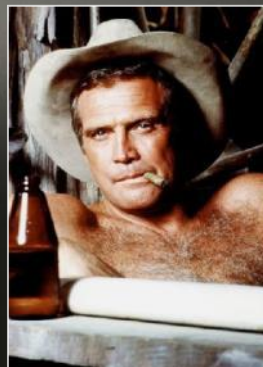
CLEAN

CHEMICAL RESISTANT

HEAT RESISTANT

HYGIENIC

SCRATCH RESISTANT



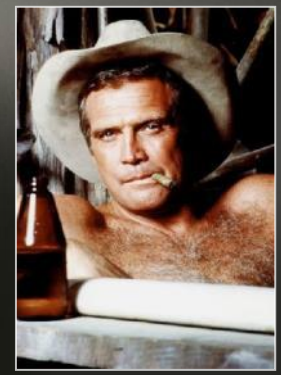


CLEAN

CHEMICAL RESISTANT

HEAT P

SCRATCH RESIS



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UV-RESISTANT

- Enamel jewels from 13th century BC prove: Glass does not age or fade, is lightfast and resistant to UV light. Never discolouring... always shining brand new!
- The colour-brilliant glaze is protected even against climatic influences and strong UV radiation. Durability "Made in Germany"
- The proof: the glazed facade of the KALDEWEI Competence Centre

IMPACT RESISTANT

EASY TO CLEAN

UV-RESISTANT

HEAT RESISTANT

HYGIENIC



KALDEWEI

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HYGIENIC & EASY TO CLEAN

- The glazed KALDEWEI surface is so hard that bacteria don't have a chance to settle on it
- This makes KALDEWEI steel-enamel more hygienic than softer materials such as acrylic and especially tiled wetroom showers – and at the end much easier to clean
- Just like the porcelain glazed plate you are eating on tonight, KALDEWEI enamel is germ free, easy to clean, hard-wearing and keeping its high shine and pristine look for years to come

UV-RESISTANT

HEAT RESISTANT

HYGIENIC & EASY TO CLEAN

SCRATCH RESISTANT

IMPACT RESISTANT



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GLASS

- Hardly any other material offers so many advantages in the bathroom as GLASS !
- With other glazed surfaces such as real glass shower screens, tiles and ceramic, KALDEWEI enamel finds itself in best company.
- Being the biggest objects in the bathroom, bathtub and the shower contributes significantly to a uniform material appearance and material quality

IMPACT RESISTANT

UV-RESISTANT

GLASS

HEAT RESISTANT

HYGIENIC & EASY TO CLEAN



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HEAT CONDUCTOR

- Steel is an excellent heat conductor and assumes the temperature of the hot water in just a few seconds
- Since steel conducts the heat, the back and armrest are heated up quickly and are also pleasantly warm
- The proof: The thermodynamics of classical physics

UV-RESISTANT

GLASS

HEAT CONDUCTOR

HYGIENIC & EASY TO CLEAN



1. **The heat rises:**
About 90-95% of heat is lost by rising from the water surface. Thus, the cooling behaviour of water is not dependent on the material.
2. **Steel is a heat conductor!**
In a steel-enamelled bathtub, the hot water quickly warms up the back-rest and arm-rest above the water. The heat absorbed by the steel is transferred back into the water when the water cools down

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