



INNOVATION MAKES A DIFFERENCE

**Wieland**

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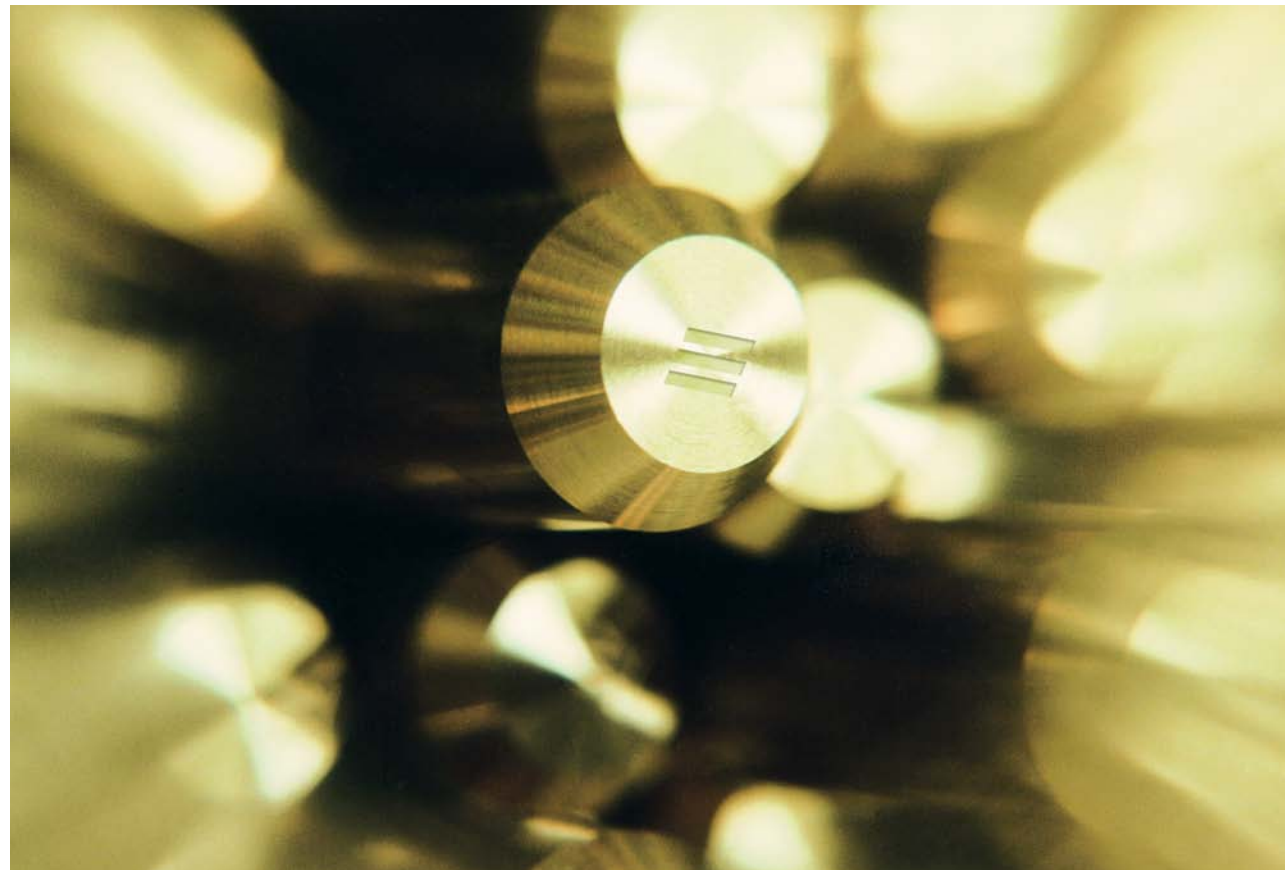
# THE BRASS MATERIAL THAT BOLDLY GOES WHERE NO BRASS HAS GONE BEFORE

## The brass material that boldly goes where no brass has gone before

ECOBASS® is the new brass material in the Wieland portfolio. Its properties are nothing less than revolutionary. It brings together qualities that were up to now practically incompatible: high strength and high elongation allow trouble-free hot and cold forming as well as combined processing. Good machining properties and improved corrosion resistance come at a lower price with ECOBRASS®, account taken of the full material and processing cycle, right through to recycling. All these advantages make ECOBRASS® a genuine better-value alternative to conventional non-ferrous metals or stainless steels.

And the benefits don't stop there. ECOBRASS® contains no toxic substances, so it's today's material of choice for all applications where health and the environment should be heeded without compromising processing quality or stress resistance.

ECOBASS® is not only your key to gaining and maintaining trendsetter status, it's also ideal for in-house processing. No more need to share your profits with subcontractors! Information brochures for your customers and all the technical information you need are available directly from Wieland's materials experts. Just say the word: ECOBRASS®.



## See what's new in ECOBRASS®:

### Higher strength

Outstanding mechanical properties that you knew only from steel up to now. Tensile strength up to 1000 MPa. That means improved loadability for the same structural size, or identical performance with miniaturized components.

### High toughness

ECOBASS® was created for the full range of fabrication processes: machining, cold forming, forging and combined processes.

### Corrosion resistance

Superior tarnish resistance, lower susceptibility to dezincification, no stress corrosion cracking – even without additional thermal treatment.

### Hot formability

The flow behaviour of ECOBRASS® compares with that of forging brasses.

### Cold formability

ECOBASS® is superbly suitable for a combination of machining and cold forming e.g. bending, riveting, crimping or knurling.

### Machinability

Even though it's lead-free, ECOBRASS® has excellent machining properties: extremely short chips, reduced roughness depth. Silicon-rich phases serve as chip breakers.

### Zero lead content

ECOBASS® contains no lead or other toxic additives: the ideal material for applications that must comply with health and environment codes.

## ELECTRICAL

**ECOBASS® for durably safe connections: plugs, terminal screws and so much more**



**ECOBASS® is the key to miniaturizing:  
it offers a significant improvement in tensile strength and fracture moment**

The stronger the material, the smaller the thickness required. Advance into next-generation miniaturizing – and secure a head start over your competitors. Torques that were unattainable with conventional brasses are now possible with the far higher strength of ECOBRASS® - with superior corrosion resistance and low relaxation ensured.

Equally impressive are ECOBRASS® elongation values. From now on, even upset and crimped components can be manufactured in brass without difficulty. And you're assured of yet another advantage with this lead-free material: its compliance with upcoming EU directives for electrical and electronic equipment, which will in future have to be free of substances detrimental to health.

## BUILDING FIXTURES AND FITTINGS

**Masterkey systems, structural elements, sanitary fixtures and fittings: forging, machining, cold forming and coating.**

**You name it – ECOBRASS® excels**



**Good strength and premium corrosion resistance for secure connections**

The essentials of secure connections: excellent corrosion resistance and high strength. If your business is producing fittings with these properties, you no longer need to bypass the time-proven qualities of copper materials – not even where mechanical stresses are critical. With ECOBRASS®, you hold the key to producing and coating reliably impervious and wear-resistant systems. And your customer will be as delighted, because ECOBRASS® means he can practically forget stress corrosion cracking and dezincification in his components.

In this, ECOBRASS® is streets ahead of other brass materials. Good machining properties, reliable functioning and high resistance to wear are vital in parts such as cylinder locks. Where customer specifications used to mean you had to fall back on steel for structural elements and put up with less than perfect machinability and the costs of added corrosion protection, you can now rely on ECOBRASS®. Its strength, elongation and corrosion resistance are every bit a match for steel.

## AUTOMOTIVE PARTS

Offer your automotive technology customers tomorrow's solutions today, with lead-free ECOBRASS®



**Strength and elongation to steel standards.**

**Unbeatable production and eco-friendly advantages**

Even your most critical customers will be impressed: unlike conventional brass materials, ECOBRASS® requires no additional corrosion protection, stress corrosion cracking is practically eliminated, and dezincification is significantly reduced. Good reason for choosing ECOBRASS® for locking systems and other automotive components exposed to stress and corrosion. What's more, ECOBRASS® even challenges some steel grades when it comes to mechanical properties, or cold and hot forming behaviour. But the full benefits over steel are only revealed in a cost

comparison over the entire production chain: ECOBRASS® is more cost-effective than steel, for the material is more favourably priced, coating is no longer required, and lead times are shorter. With ECOBRASS® you can offer your customers the advanced alternative, even for automotive parts exposed to dynamic stresses: a material that is free of harmful substances and robustly indifferent to moisture as well as high and low temperatures.

## OPTICS + FINE MECHANICS

ECOBRASS®: Optimum machinability, high strength and durability in everyday use



**Excellent processing behaviour, resistant to softening through soldering**

ECOBRASS® is a nickel-free material. With its impressive strength profile and the good machinability ensured by its silicon content and shorter broken chip, ECOBRASS® is particularly suitable for functional parts, e.g. on spectacles. ECOBRASS® takes joining processes in its stride, because its low conductivity means soldering is no problem. Silicon not only raises resistance to tarnishing, it also reduces susceptibility to dezinc-

ification and prevents stress corrosion cracking. These advantages make ECOBRASS® a welcome addition to the range of materials in the writing utensils industry, too. Ballpoint pen tips are just one example: with properties such as good machinability and cold formability, ECOBRASS® easily outstrips other materials.