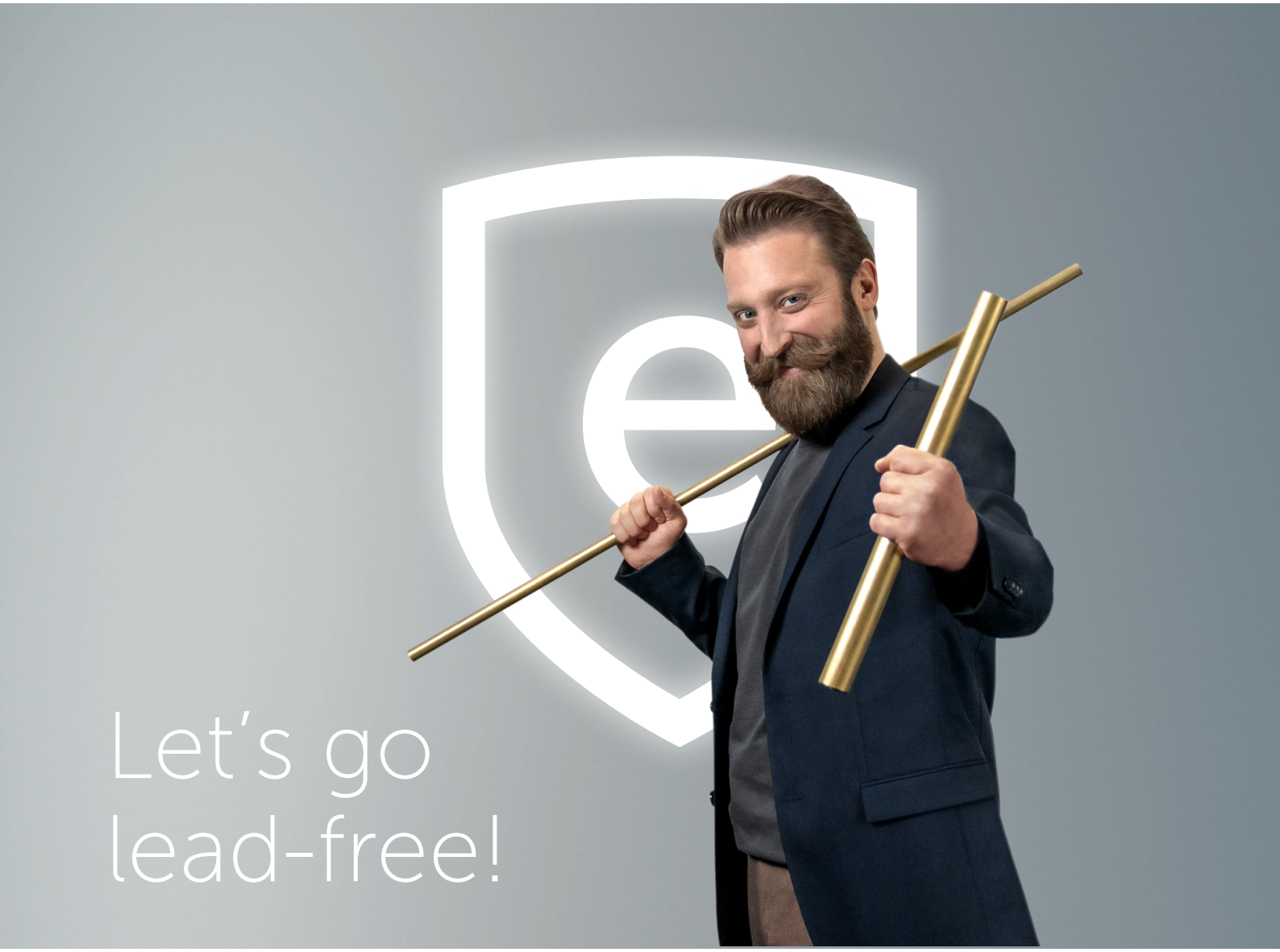
wieland

ecoline®

The lead-free alloys



ecoline® + experts = success

Our formula for a lead-free future

Wieland is the driving force in lead-free materials, recycling, and sustainability through our ecoline alloys. We ensure that there is clean drinking water, lead-free electronics, and products free from pollutants. Wieland ecoline is the ideal choice for ensuring your business's future success. However, our lead-free machining brass isn't the only factor that sets us apart. Our team of experts brings invaluable knowledge and personal dedication to guide you through the transition to lead-free alloys. We'll support you every step of the way, ensuring everything runs smoothly, and in the future. In short: Wieland ecoline – Let's go lead-free!

ecoline® made to measure for your application

Not all lead-free is the same, and one alloy for everything cannot always fulfil your specific requirements. That is why we at Wieland have developed different lead-free products which are suitable for industry and customer-specific requirements. Our ecoline alloys fulfil the highest demands that are made of machinability and formability - in compliance with the relevant regulations and guidelines. We offer customised ecoline variants for a wide range of industries.

Unique in its diversity

ecoline® made to measure for your application

ecoline®
for drinking water installation

Our lead-free alloys are the perfect answer to the stricter material requirements of the future, and guarantee the highest drinking water quality.

ecoline®
for automotive

Heavy mechanical loads and high temperatures – materials for automotive applications have to withstand a great deal. Standard brass is mainly used here, supplemented by special brass materials (eco SX1®, eco SD4®). Our ecoline alloys are characterised by properties such as heat resistance and low wear.

ecoline®
for electrical engineering

Electrical conductivity and high mechanical strength are decisive factors in electrical engineering. We will work with you to find the right copper material for your electrotechnical application. In addition to standard brass (eco SZ3®, eco SZ4®, eco SZ5®), our range also includes materials with high electrical strength and conductivity (eco KS2®, eco KS4®, eco BS2®).

ecoline®
for accessories

Thanks to our lead-free ecoline alloys, products such as watches, jewellery, stationery, glasses and wind instruments are harmless to health and give your customers more than just a good feeling.

Everything on e!

Our seal of quality for lead-free alloys

economical

Not only do all lead-free ecoline alloys reach the level of previous lead-containing products; together with the easily customisable production and compatibility with established SiP-containing recycling cycles, they are extremely economical overall.

ecological

All ecoline alloys are environmentally friendly thanks to the low lead content of <0.1 % and the lower hot forming temperatures – which in turn provide sustainable energy savings. Recycling is also particularly straightforward thanks to compatible scrap cycles within the alloy families.

experts

Our experts are characterised by an in-depth understanding of our customers' challenges on the one hand, and detailed process and product know-how on the other.

efficient

The excellent machinability (comparable to lead-containing alloys) and hot formability make our ecoline alloys particularly efficient.

experience

Wieland customers can count on the many years of comprehensive expertise of our ecoline experts in the transformation from lead-containing to lead-free alloys.

We set new standards

eco SZ3®: The lead-free alternative

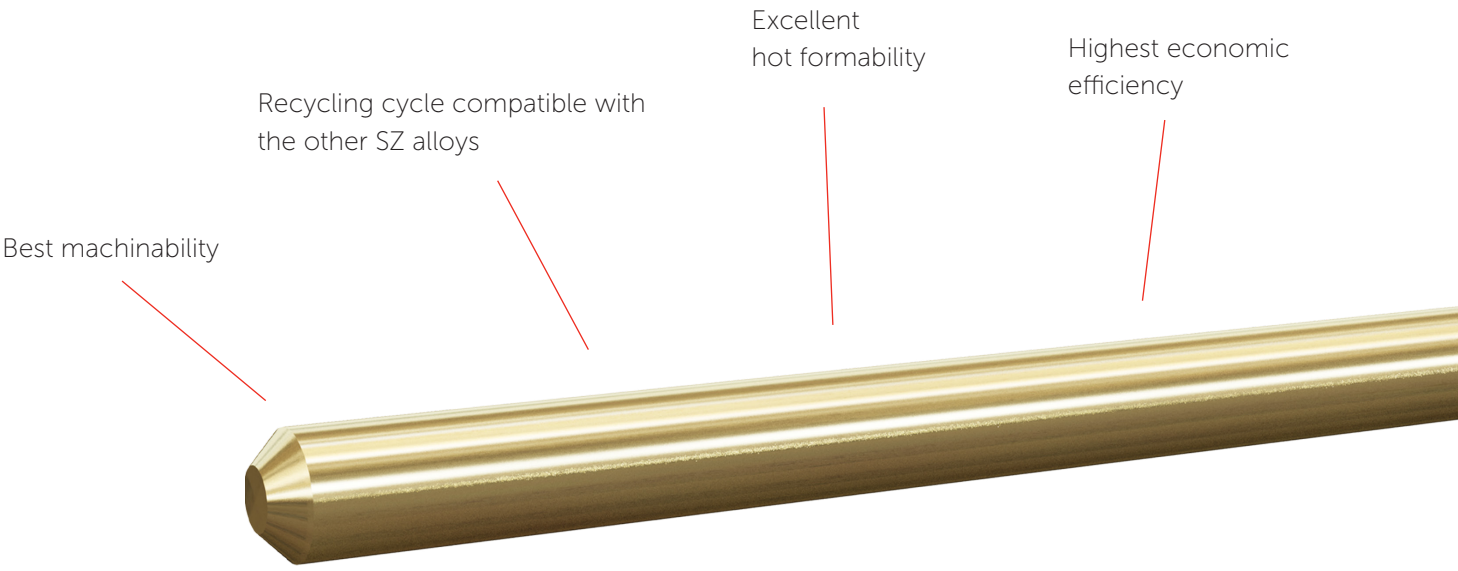
With our new eco SZ3 machining brass, which uses less than 0.1 % lead, we are taking efficiency to a new level. This innovation provides a previously unattained level of productivity among lead-free material solutions, and is therefore the ideal solution on the market as an alternative to cutting brass containing lead CW617N / CuZn40Pb2 and CW614N / CuZn39Pb3. The new flagship product eco SZ3 was developed to fulfil the demands for conductivity, corrosion resistance and mechanical properties which are typically made of the above-mentioned leaded brass alloys. These properties make the material highly interesting for use in the sanitary, electrical engineering and automotive sectors.

Highly economical and recyclable

In addition to the outstanding machining properties of eco SZ3, the ratio of just 60 % copper and 40 % zinc ensures that there is a reduced metal price component and high cost-effectiveness. eco SZ3 is a member of the CuZnSiP alloy family, which allows low mixing of chips and scrap within the alloy family and eliminates the need for tedious cleaning of the machine when changing alloys. As with their lead-containing counterparts, chips and scrap can be reprocessed into new bars without any loss of quality. eco SZ3 therefore makes an important contribution to climate-neutral and circular metal recovery.

Outstanding characteristics

Thanks to unique copper expertise



ecoline®	EN designation	Machinability	Cold forming	Hot forming	IACS	Corrosion res.	Regulations
eco BS4	CuSn5NiPS	70 %	good	less suitable	14.7		RoHS
eco GS1	CuSn4Zn2PS-C-GC	70 %			20	ISO 6509	DWD, SDWA
eco KS2	CuSP	80 %	very good	average	90		RoHS
eco KS4	CuNi1SP	70 %	good	average	50		RoHS
eco M58	CuZn42	50 %	less suitable	very good	24		REACH Annex 17, CPSIA
eco N59	CuNi9Zn41FEMn	50 %	average	good	10		RoHS, REACH Annex 17
eco SD4	CuZn37Mn3Al2Si	45 %	less suitable	very good	13		ELV
eco SW1	CuZn21Si3P	90 %	good	very good	7.8	ISO 6509	RoHS, ELV
eco SW3	CuZn21Si3P-C-GC	80 %			7.8	ISO 6509	DWD, SDWA
ecobrass SW4	CuZn21Si3P	90 %	good	very good	7.8	ISO 6509	DWD, SDWA
eco SW5	CuZn21Si3P	90 %	good	very good	7.8	ISO 6509	REACH Annex 17
eco SX1	CuZn31Mn2SiAl	70 %	good	very good	17		ELV
eco SZ3	CuZn40SiP	90 %	less suitable	very good	23		RoHS, ELV
eco SZ4	CuZn42	85 %	less suitable	very good	25		RoHS, ELV DWD, SDWA
eco SZ5	CuZn40	75 %	average	good	25		RoHS. ELV

Talk to our experts!

www.wieland-ecoline.com
ecoline@wieland.com

Wieland-Werke AG I Graf-Arco-Straße 36 I 89079 Ulm I Germany I P +49 731 944 0
info@wieland.com I wieland.com