

QUALITY CERTIFICATE
for high grade wedding rings
produced by EGF Manufaktur

Wearing wedding rings every day exposes them to strong chemical and mechanical stress. Only optimised properties and high quality standards will ensure the longevity and wearing comfort of this valuable article, which is often invested with emotion and memories.

Precious metals are the most stable materials available for the production of jewellery resistant to aggressive environmental influences. They suffer no visible corrosion and durability is assured. Their biological skin compatibility is excellent and has proven of value for thousands of years. Selection of suitable additives for the alloys is extremely important. Most components of wedding rings are found as natural metallic resources in nature. Nickel, in some cases an allergenic metal, has been totally excluded from the production by EGF. The proportion of precious metal is warranted by the hallmarking of the ring, and ensured by regular analysis. Ethical purchasing of diamonds is guaranteed by the supplier.

Wedding rings made by EGF are of solid precious metal alloys and therefore receive no surface coating to achieve even colours. Therefore the colour remains unchanged over the complete life span of the ring, even with abrasion of the surface over many years.

Precious metals are highly mouldable. However, they can suffer damage from deformation or scratching. By increasing the alloy hardness the mechanical resistance can be considerably improved. Through adapted alloys, but particularly by selective cold forming during production, the hardness of a wedding ring is improved, so that scratches and indentations through wearing stresses are perceptibly reduced. Certain alloys can be hardened to a minimum 160HV and even over 220HV. A few multi-coloured wedding-rings cannot reach the hardness of single-coloured ring due to thermal assembly. Nevertheless, the manufacturing technology ensures that the best possible and technically feasible hardness value is obtained.

The hardness of a ring will be quantified by the stamp of a diamond-pyramid on the surface of the metal. This measurement is made according to the Vickers hardness test procedure, defined in a DIN-standard. The measurement of the pressure is then a unit for the resistance against the intrusion of any body and is identified with the description HV for Vickers hardness. This measuring technique reproduces accurately the stresses of wearing the ring and is therefore a suitable and ideal physical test process. The mastering of the complete production process, accordingly optimised, leads to the desired hardness increase and is ensured by continuous controls. This type of ring manufacture, similar to the forging of metal, yields far better usage properties and product life than is achieved with cast rings.

A high hardness also improves the mechanical stability. Rings of a smaller size are less likely to be deformed through pressure e.g. through tight or forceful grips on door handles or tools. Furthermore the optimised hardness assures a solid and safe setting for a precious stone in the ring, because the higher resistance of the metal secures the stone in position with greater force.

For the customer the accurate fit of the finished ring is very important for wearability and comfort. Controlled processes on precision machines ensure the compliance to the required measurements during production. With electronic measuring equipment the rings are carefully checked before shipment, the precise measurement being to an accuracy of min.0.1mm to guarantee a perfect fit for the customer.

The EGF-Manufaktur production facilities for wedding rings are located in Pforzheim, from the melting and fabrication to the polishing and engraving. Continuous optimisation of processes and high quality control standards throughout guarantees the best possible end product in the shortest delivery times.

Customer expectations are met using precision machines, well trained workers and a complex system of quality control.

The processes are defined and documented. And the production machinery and equipment is subject to continuous inspection and maintenance. Furthermore, the Jewellery Technology Institute of the University of Pforzheim carries out an annual external and independent audit of the quality control system. Thereby special attention is focused on the important features of wedding ring production as previously described. Through this certification of the production process, the conformity of the delivered rings with the high quality standards by EGF-manufacture can be assured.

The Jewellery Technology Institute found that adherence to the process parameters, the quality control plan, and the inspection of measurement equipment and their documentation was flawless.

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