



Certificate

N°: **BAM/ZBF/007/13**

1st Revised version

Hereby it is confirmed by the BAM Certification Body, that the

Material copper-beryllium

of the manufacturer

BETA UTENSILI S.p.A.

meets the requirements of **BAM Standard operating procedure „StAA-NEG-005“: „StAA zur Schlagfunkenprüfung von Werkstoffpaarungen“** dated **2017-03-01** and thus the non-sparking tools made of this material are appropriate for use in potentially explosive atmospheres of zones 1 and/or 21 according to Directive 1999/92/EC for all reference fuel gases in all explosion groups according to IEC 60079:2004 Part 0, if the terms and conditions set out in the annex to this certificate are met.

The certification is based on certification contract N° **BAM-ZBF-0014-2012-BETA** and comprises according to standard ISO/IEC 17065:2012 a design-type test with the manufacturer's declaration of conformity (BAM Certification system I).
The products certified by BAM may be labelled with the certification mark "BAM design-type tested" / "BAM Baumustergeprüft".

The certificate is valid until July 18, 2023.

BAM test report **BZS-GS/082/12; 2-1201/2012** dated **July 12, 2013** as well as **procedure number BZS-GS/038/18** form the basis of this certificate.

for Bundesanstalt für Materialforschung und -prüfung (BAM)
Unter den Eichen 87,12205 Berlin, **2018-07-19**

Dr. R. Schmidt
BAM Certification Body



Dr. R. Grätz
BAM Assessor

Distribution list: 1st Certificate holder

2nd BAM Certification Body

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CERTIFICATE

Conditions for use of the certified material

The non-sparking tools made of the certified material copper-beryllium are appropriate for use in potentially explosive atmospheres of zones 1 and/or 21 for all reference fuel gases in all explosion groups according to IEC 60079:2004 Part 0, if the following terms and conditions are met:

- The material composition of this material shall comply with the material composition of the tested samples, namely:

Copper-beryllium:

Material grade: 97.7 % Cu, 1.85 % Be, 0.24 % Ni, 0.06 % Fe and < 0.005 % Co (according to the documentation from Beta Utensili S.p.A., dated October 17, 2012, receipt in BAM on May 13, 2013, BAM Tgb.-No. 2-1428/2013).

- The intended use of the tools made of the certified material shall be described by the certificate holder in such a manner that the max. absorption of mechanical energy during a possible impact of the tools on the ground does not exceed 61 Nm. This corresponds to a falling height of 10 metres of a tool with a weight of for example 6.1 N (approx. 600 g). This statement is valid only for a concrete quality of the following composition, used for testing in our laboratory:

Concrete quality (sand: d/D 0/4mm, no gravel) according to the documentation from Beta Utensili S.p.A., receipt in BAM on May 13, 2013, BAM Tgb.-No. 2-1428/2013

Composition of the concrete: 60 % sand, 30 % concrete, 10 % water, BAM Tgb.-No. 2-2001/2013.

Berlin, 2018-07-19

Place, Date



Signature BZS