

**BAM****Federal Institute for
Materials Research
and Testing**12200 Berlin, Germany
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Internet: www.bam.de**Certificate****N°: BAM/ZBF/007/13**

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

Material copper-beryllium

of the manufacturer

BETA UTENSILI S.p.A.
Via A.Volta 18
20845 SOVICO (MB)
Italy

meets the requirements of **BAM Standard operating procedure „StAA-NEG-005“**: „StAA zur Schlagfunkenprüfung von Werkstoffpaarungen“ dated **2012-03-01** and thus the non-sparking tools made of this material are appropriate for use in potentially explosive atmospheres of zones 0 and/or 20 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 DIN EN 45 011 (1998) 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, 2018.

BAM test report **BZS-GS/082/12; 2-1201/2012** dated **July 12, 2013** is a constituent part of this certificate.

for BAM Bundesanstalt für Materialforschung und -prüfung
Unter den Eichen 87, 12205 Berlin, **2013-07-19**

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 0 and/or 20 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, 2013-07-19

Place, Date

Signature BZS
BAM-Zertifizierungsstelle
(BZS)