

Conditions for use of the certified material

The non-sparking tools made of the certified material beryllium-copper are appropriate for use in potentially explosive atmospheres of the zones 1 and/or 21 of all explosion groups (I, IIA, IIB & IIC), if the following terms and conditions are met:

- The material composition of this material shall comply with the material composition of the tested sample, namely:
 - o Beryllium-copper:
 - ≥ 99,0 % Cu+Be+Co+Ni+Fe, 1,8 % bis 2,3 % Be;
 - ≥ 0,2 % Co+Ni; ≤ 1,2 % Co+Ni+Fe, hardness: 283-365 HB, see letter dated January 28th, 2021

- 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 60 Nm. This corresponds to a falling height of 10 metres of a tool with a weight of for example 6 N (approx. 600 g). This statement is valid only for a concrete quality of the following composition, used for testing in our laboratory:

Composition of the concrete: Concrete according recipe of BAM 7.4

Cement E290, flux material 5,8 %, gravel 0,1 to 0,5; 0,5 to 1,0; 1,0 to 2,0; 2,0 to 4,0; corundum 5,0 %, steel reinforced wire; see Table 1 and Diagram 1 of the Annex of the Test report

Berlin, 2021-02-23

Place, Date



J. Sum d. Katt

Signature BZS



Official statement of the BAM Certification Body (BZS) regarding the mode of operation in the framework of certification of material pairings for use in low sparking hand tools in the certification sector “Voluntary Certification” (ZBF)

In the course of 2016 the Technical Rule for general plant safety has been subject to a revision and our BAM experts have been involved in this work.

BG RCI in Germany is an authority member of the statutory accident insurance, being responsible for the chemical industry. The BG RCI regulations form an integral part of the technical rules of the Hazardous Substances Ordinance and, in Germany, they have a statutory character. The BG RCI regulations prohibit the use of tools in areas of zones 0 and 20 in case that few single sparks might occur during their application. These explanations have been integrated in the DGUV (Deutsche Gesetzliche Unfallversicherung) regulations since 2017 and BAM exclusively make reference to these specifications.

As a consequence BAM has been reviewing its practices and has come to the conclusion that, in order to improve the processes, **certification can only be granted for zone 1/21**. Our experience from former testing has shown that it is highly improbable that no sparks occur during the testing procedure and that the materials in general are appropriate for zone 1/21.

Since the use of the certified materials in zone 0/20 does not give rise to immediate risk, all the formerly issued certificates (valid until 2020) are protected and need neither to be withdrawn nor amended.

Berlin, 2018-09-10

Dr. R. Schmidt

**BAM-Zertifizierungsstelle
(BZS)**

Dr. R. Grätz