



## CS Unitec Non-Sparking Tools Certifications

**CS UNITEC SAFETY TOOLS** are covered by a certification delivered by the BAM Berlin, Germany.

### What does BAM stand for?

*The BAM is the federal institute for material and research based in Berlin, Germany. BAM issues testing programs, achieves tests and certifies materials according to specific protocols.*

### Why choose the BAM for non-sparking tools?

*BAM is a government agency created in 1954 and is the most known and trusted laboratory in Europe to achieve tests on materials' safety.*

### How is a spark created?

*A spark is an incandescent particle of metal generated when detached from the main part of metal. The energy produced by this particle depends on the hardness of the material. Steel creates incandescent sparks when softer materials do not.*

*The materials used by **CS UNITEC SAFETY TOOLS** to manufacture the tools must combine enough strength for working in difficult conditions while keeping its non-sparking property.*

### How does BAM relate to **CS UNITEC SAFETY TOOLS**?

*Materials used to manufacture **CS UNITEC SAFETY TOOLS** have been tested and approved by the BAM to be non-sparking. Therefore, the tools made from the tested materials help fulfill the requirements indicated by the European ATEX directive 1999/92/EC.*

**For more information on BAM and  
Non-sparking tools certifications, visit:**  
[www.csunitec.com/nonsparking](http://www.csunitec.com/nonsparking)



**BAM** Type Approved

**Certification No. BAM/ZBF/004/14**

The BAM certificate relates only to the  
properties of the material pairings

**BAM**

Federal Institute for  
Materials Research  
and Testing

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## Certificate

N°: BAM/ZBF/005/14

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

**Materials aluminum-bronze (AlBz)  
and  
beryllium-copper (BeCu)**

**with the compositions and conditions of use described in the annex to  
this certificate**

of the manufacturer

**CARLTSOE Safety Tools  
Route de Chésalles 48  
1723 MARLY  
SWITZERLAND**

meet the requirements of **BAM Standard operating procedure  
„QMH-NEG-005“: „StAA zur Schlagfunkenprüfung von  
Werkstoffpaarungen“ dated 2012-03-01** and thus the non-sparking tools  
made of these materials are appropriate for use in potentially explosive  
atmospheres of zones 0 and/or 20 according to Directive 1999/92/EC of all  
explosion groups according to IEC 60079-20-1:2010, **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-0013-2013-AC Safety Tools** 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 tools made of these materials may be labelled with the certification mark  
"BAM design-type tested" / "BAM Baumustergeprüft" only with a special note,  
that the certification exclusively refers to the properties of the material  
pairings.

**The certificate is valid until June 30, 2018.**

BAM test report **2-2004/2013 dated May 23, 2014** is a constituent part of  
this certificate. This certificate is only valid in connection with the annex.

for BAM Bundesanstalt für Materialforschung und -prüfung  
Unter den Eichen 87-12205 Berlin, **2014-07-01**

Dr. R. Schmidt  
BAM Certification Body



Dr. R. Grätz  
BAM Assessor

Distribution list:: 1st Certificate holder

2nd BAM Certification Body

Certificates may be published only in full wording and without any additions. Revocable written consent shall be  
obtained from BAM for changed reproduction and excerpts. The German certificate is authoritative. Place of  
jurisdiction is Berlin.

Safety in technology and chemistry



CERTIFICATE



## Conditions for use of the certified materials

The non-sparking tools made of the certified materials aluminium-bronze and/or beryllium-copper are appropriate for use in potentially explosive atmospheres of the zones 0 and/or 20 of all explosion groups, if the following terms and conditions are met:

- The material composition of these materials shall comply with the material composition of the tested samples, namely:
  - o aluminum-bronze (AlBz):  
78 % Cu, 10,0 % to 11,5 % Al, 3,5 % to 5,0 % Fe, 4,0 % to 5,5 % Ni, 3,5 % Mg, 0,5 % other; hardness: 228 HB 30 (according to letter dated May 16, 2014, BAM-Tgb.-No.: 2-2004/2014)  
and
  - o beryllium-copper (BeCu):  
1,8 % to 2,0 % Be, 0,20 % to 0,6 % Co, 0,5 % other, rest copper;  
hardness: 350 HB 30 (according to letter dated May 16, 2014, BAM-Tgb.-No.: 2-2004/2014)
- The intended use of the tools made of the certified materials 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 72 Nm. This corresponds to a falling height of 10 metres of a tool with a weight of for example 7,2 N (approx. 730 g). This statement is only valid for surfaces made from concrete with the following quality:
  - concrete C20/25 (according to letter dated January 30, 2013; BAM-Tgb.-No.: 2-378/2013): naturally fine gravel, extraction place: Gräfeling, gravel-size category 0/4, category G<sub>F</sub> 85 (according to letter dated May 21, 2013; BAM-Tgb.-No.: 2-1247/2013 on base of examination report TU München, CBM dated April 1, 2014).

Berlin, 2014-07-01

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Place, Date



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Signature BZS

## **Decree on the Federal Institute for Materials Research and Testing**

### **§ 1 Status, Purpose**

- (1) The Federal Institute for Materials Research and Testing (BAM) is an institute of public law without legal capacity within the authority of and directly accountable to the Federal Ministry of Economics and Technology (BMWt); it is a Senior Federal Authority.
- (2) BAM shall promote the development of German industry by performing the tasks assigned to it by law or decree.

### **§ 2 Task, Field of Activity**

- (1) BAM shall carry out materials research and testing with the aim of enhancing safety in engineering and chemical technology; it shall promote knowledge and technology transfer.
- (2) Its field of activity shall include research and development, testing, analysis and approval as well as advice and information.
- (3) BAM is obligated to make the results of its work available to and usable for the public.

### **§ 3 Organisation**

- (1) BAM is structured in departments and divisions. Its activities are organised within working groups and projects.
- (2) Cost and performance analysis shall be used to enhance the efficacy of task completion. BAM's strategy and development are codified in a target agreement with BMWt which is usually reappraised and renewed every third year.
- (3) In agreement with BMWt, the Advisory Board and, if applicable, scientific committees, BAM develops a research programme which is updated every two years.

### **§ 4 Tasks within Public Administration**

- (1) BAM shall advise the Federal Government.
- (2) BAM shall perform tasks commissioned by BMWt or, with the consent of the Ministry, by other Federal Ministries.
- (3) BAM shall comply with requests from administrative bodies and courts within its area of competence.

### **§ 5 Third-party Mandates**

- (1) BAM can accept third-party mandates within its area of competence.
- (2) Specifically, it should accept those regulatory or standardisation mandates that are in the interest of Germany and where other private or state institutions are not available to undertake them.
- (3) Performing third-party funded research projects is subject to BAM's third-party codex approved by BMWt.

### **§ 6 Cooperation**

- (1) BAM shall acquire additional knowledge for the completion of its tasks through national and international cooperation with universities and scientific institutes, research establishments, materials testing offices, and industry.
- (2) In agreement with BMWt, it shall contribute to the work of national and international regulatory and standardisation committees.

### **§ 7 Fees**

BAM shall charge fees for the execution of mandates in accordance with a schedule of fees issued for this purpose.

### **§ 8 Management and Substitution**

- (1) BAM is headed by the President and, in such cases where he/she is unavailable, by the Vice-President.
- (2) The President – and, in such cases where he/she is unavailable, the Vice-President – represents the Federal Republic of Germany both in and out of court in all affairs concerning BAM.
- (3) The President, the Vice-President and, if applicable, an additional member form the Presidential Board. The Presidential Board identifies the principles of the technical work and work programmes. Final decisions are made by the President.
- (4) The President can use the support of a Board of Directors. The Board of Directors comprises the Presidential Board and the Heads of Department. Details shall be specified in a business distribution scheme.

### **§ 9 Reporting**

The President shall report to BMWt and the Advisory Council at least once annually. He/she shall submit a review of BAM's all key parameters and highlight the relevant key issues of BAM's work, as well as their importance for the enhancement of safety in engineering and chemical technology.

### **§ 10 Advisory Council**

- (1) BMWt and BAM's management shall be advised by an Advisory Council in all fundamental issues; in particular, on BAM's long-term strategy and development of the research programme.
- (2) The Advisory Council shall consist of up to 20 honorary members. The members shall be appointed by BMWt.
- (3) Meetings of the Advisory Council shall be attended by those BAM employees specified in § 8 (4) and BMWt's representatives. Other Federal Ministries, in agreement with BMWt, can delegate representatives.
- (4) Other details shall be regulated in the Advisory Council's decree.

### **§ 11 Scientific Committees**

After consultation with BMWt, BAM can establish scientific committees which can provide advice on specialist key issues.

### **§ 12 Entry into Force**

This decree enters into force on 1 July 2011; simultaneously, the decree of 13 October 1995 (Federal Gazette – Bundesanzeiger – No. 202 of 26 October 1995) and the decrees amending it become ineffective.

Berlin, 31 May 2011

For the Federal Minister of Economics and Technology

B. Heitz