



Non-Sparking and Non-Magnetic Safety Tools



For Use in Hazardous Environments and ATEX and Ex Zones

CS Unitec offers a complete line of High-Quality Non-Sparking, Non-Magnetic and Corrosion-Resistant Safety Tools. CS Unitec is a leader in special Copper Alloy Safety Hand Tools manufactured for use in high-risk areas where a spark can create a disaster.

Copper-Beryllium Tools (CuBe₂) fulfill the demand in the ATEX Directive 94/9/EC for work in Zones 0, 1 and 2 (Gas, Mists or Vapors); Zones 20, 21 and 22 (Dusts); and M1 and M2 for mining.

Aluminum-Bronze Tools (AlBr) fulfill the demand in the ATEX Directive 94/9/EC for work in Zones 1 and 2 (Gas, Mists or Vapors), plus Zones 21 and 22 (Dusts).

CS Unitec's Aluminum Bronze (AlBr) and Copper Beryllium (CuBe₂) tools are also BAM certified. They have met the requirements of BAM Standard operating procedure and are appropriate for use in potentially explosive atmospheres of Zones 0, 1, 2 and/or 20, 21, 22 according to Directive 1999/92/EC of all explosion groups according to IEC 60079-20-1:2010.

 **BAM** Type Approved
Certification No. BAM/ZBF/004/14
The BAM certificate relates only to the properties of the material pairings



Zone Definitions

Gas, Mists or Vapors

- **Zone 0** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is present frequently, continuously or for long periods.
- **Zone 1** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is likely to occur in normal operation occasionally.
- **Zone 2** - An atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation but, if it does occur, will persist for only a short period.

Dusts

- **Zone 20** - An atmosphere where a cloud of combustible dust in the air is present frequently, continuously or for long periods.
- **Zone 21** - An atmosphere where a cloud of combustible dust in the air is likely to occur in normal operation occasionally.
- **Zone 22** - An atmosphere where a cloud of combustible dust in the air is not likely to occur in normal operation but, if it does occur, will persist for only a short period.



How to Choose the Correct Alloy for Your Application

	Aluminum-Bronze (AlBr) Alloy	Copper-Beryllium (CuBe ₂) Alloy
Zone Compatibility	Fulfill demand in ATEX directive 94/9/EC for work in Zones 1, 2, 21 and 22	Fulfill demand in ATEX directive 94/9/EC for work in Zones 0, 1, 2, 20, 21 and 22
Hardness	27 HRC	38 HRC
Durability	Not as durable as CuBe ₂ .	Very durable due to high hardness and tensile strength.
Magnetic Properties	Low magnetism due to minimal ferrous components. Appropriate for non-critical non-magnetic applications.	Non-ferrous components; safer for applications demanding non-magnetic properties.
Composition	Al: 10.3% Ni: 4.5% Cu: Balance Fe: 4.5% Other: 0.5%	Be: 1.9% Other: 0.5% Co + Ni: 0.4% C: Balance

MSDS (Safety Data Sheet) is available upon request.
WARNING: Safety tools should not be used in contact with Acetylene.
WARNING: Safety tools must only be ground or resharpened by companies approved for grinding such material, according to OSHA regulations.
CAUTION: User must follow all appropriate safety regulations when choosing a tool for their particular working environment.

