



Beryllium Science & Technology Association

## Beryllium Safety Bulletin

### SAFETY PRACTICES FOR WELDING COPPER BERYLLIUM

Copper beryllium (CuBe), in solid form and as contained in finished products, presents no special health risks. Most manufacturing operations, conducted properly on well-maintained equipment, are capable of safely processing copper beryllium-containing materials. However, like many industrial materials, copper beryllium may present a health risk if handled improperly. The inhalation of dust, mist or fume containing beryllium can cause a serious lung condition in some individuals. The degree of hazard varies, depending on the form of the product, how it is processed and handled, as well as the amount of beryllium in the product. Read the product specific Material Safety Data Sheet (MSDS) for additional environmental, health and safety information before working with copper beryllium alloys.

In accordance with Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.252, the welding of materials containing beryllium is regulated as follows: "Welding or cutting indoors, outdoors, or in confined spaces involving beryllium containing base or filler metals shall be done using local exhaust ventilation and pressure-demand airline respirators unless atmospheric tests under the most adverse conditions have established that the workers' exposure is within the acceptable concentrations defined by 29 CFR 1910.1000. In all cases, workers in the immediate vicinity of the welding or cutting operations shall be protected as necessary by local exhaust ventilation or airline respirators."

During welding operations, ventilation is required to prevent airborne generation of beryllium-containing particulate from the dispersal of slag particulate at the surface of the weld pool during welding.

A side-draft ventilation welding enclosure used to weld other metals will provide a safe environment when welding copper beryllium alloys. If the welded parts are abrasively cleaned, ventilation must be provided to prevent airborne generation of beryllium-containing particulate during the cleaning operations.

Resistance spot welding of copper beryllium parts typically requires no extra ventilation since the weld nugget is small and is not exposed.

#### ADDITIONAL INFORMATION

If there are concerns about potential beryllium exposure in your workplace, contact an industrial hygienist or other qualified occupational health and safety specialist to perform a workplace assessment and exposure characterization.

The information contained in this Beryllium Safety Bulletin applies only to the subject referenced in the title. Read the safety information provided to you by the supplier for more detailed environmental, health and safety guidance specific for the products in use at your facility.

Additional information may also be available by contacting:

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