

Frequently Asked Questions about Copper Beryllium and Skin Contact FAQ 108

Can touching or handling copper beryllium alloy products in solid or massive form cause chronic beryllium disease (CBD)?

No, you cannot contract CBD through skin contact.

Can cuts involving copper beryllium alloy cause CBD?

No. Cuts involving copper beryllium alloys are no different than cuts from other metal alloys. There are no specific beryllium-related, adverse health effects associated with skin cuts involving copper beryllium alloys. However, open wounds can be a pathway for small particles to enter the skin. As a good hygienic practice, wounds should be properly cleaned and bandaged and kept clean to aid the healing process.

Does routine touching or handling of copper beryllium alloy products in solid or massive form cause skin reactions or rash?

No, routine contact with copper beryllium alloys does not generally cause skin reactions or rash. However, prolonged and/or repeated skin contact with copper beryllium alloys may cause, in some sensitive individuals, a skin reaction due to some of the metal elements that may be contained in various forms of copper beryllium alloys. For example: prolonged skin contact with nickel and cobalt may cause allergic dermatitis, and copper may cause a greenish-black skin discoloration. Prolonged contact with beryllium metal has not been shown to result in a skin reaction.

Can copper beryllium chips or dust imbedded under the skin cause beryllium sensitization?

Possibly. Because this alloy contains beryllium, we believe it prudent to warn that particulate lodged in the skin or entering skin wounds has the potential to result in sensitization to beryllium. Therefore, it is important to remove imbedded chips or dust and keep skin wounds clean and covered.

What is beryllium sensitization?

Beryllium sensitization means a response in the immune system of a specific individual who has been exposed to beryllium. There are no associated physical or clinical symptoms and no illness or disability with beryllium sensitization alone, but the response that occurs through beryllium sensitization can enable the immune system to recognize and react to beryllium. While not every beryllium-sensitized person will develop CBD, beryllium sensitization is essential for development of CBD.

See our FAQ 105 - Frequently Asked Questions about the Beryllium Blood Lymphocyte Proliferation Test (BeBLPT), for more information on sensitization testing.

What is Materion Brush Inc.'s position on protecting the skin of beryllium workers from exposure to beryllium?

Materion Brush Inc. believes it is a good work practice to protect skin from contact with solutions containing fine beryllium particulate or salts (pickling solutions), or fine particles containing beryllium. We also believe that no special skin protection is needed when handling clean metal or large clean metal pieces or chips. "Clean" is defined as visibly clean, and not coated with residual salts, or fine particulate in solutions or lubricants containing beryllium. Good hygiene and safety practice dictates skin protection from cuts and abrasions, maintenance of skin cleanliness, cut and abrasion first-aid treatment and protection of wounds from contamination.

Examples of tasks where special skin protection is unnecessary:

- Slitting and stamping operations
- Packaging or handling of clean copper beryllium alloy materials
- Non-destructive testing of clean copper beryllium alloy samples
- Dry milling, drilling or machining of copper beryllium alloys that are clean, and are not surface oxidized from heat or chemical treatment

Examples of tasks where skin protection should be used to keep particulate off of the skin:

- All operations in which copper beryllium alloy is coated with dust, fluid*, lubricant*, or surface oxide
- Melting and casting of copper beryllium alloys
- Welding, annealing in air or hot working
- Pickling processes
- Grinding, polishing or buffing of copper beryllium alloys

*Consistent with OSHA-recommended good work practice, use skin protection to prevent skin contact with coolants and lubricants during milling, machining, cold rolling or drawing of copper beryllium alloys.

Materion Brush Inc. encourages those processing copper beryllium alloys in ways which generate particulate containing beryllium to utilize engineering and work practice controls to keep copper beryllium work areas clean and to keep particulate containing beryllium out of the lungs, off the skin, off of clothing, in the work process, in the work area and on the plant site.

How can I obtain assistance?

If you have any questions regarding the above information, please contact your sales representative; our sales department at +1-216-486-4200; or the Product Safety Hotline at 1-800-862-4118 (in the U.S.) or +1-216-383-4019 (outside the U.S.). This document, as well as other product specific safety data information, can be found at www.materion.com. Additionally, information on the Beryllium Worker Protection Model and process specific safety guidance can be found in the Interactive Guide to Working Safely with Beryllium and Beryllium-containing Materials at www.berylliumsafety.com.