

Keep Beryllium Off of the Skin

July 2018

Keep Beryllium Off the Skin

- Keeping beryllium off of the skin is highlighted to avoid beryllium-containing particles entering the skin through cuts, abrasions and rashes.
- The relationship between aspects of skin exposure (particle size, quantity, skin damage, etc.) and beryllium sensitization is still under investigation.
- Beryllium-containing particles on the skin can also result in inhalation exposure due to hand and arm contact with the face.

Keep Beryllium Off the Skin

Procedures are in place and observed to prevent skin contact with beryllium solutions, salts, or fine particulate on surfaces or where there is potential for falling, spilling or splashing of liquids or dusts containing beryllium.

When handling clean solid beryllium containing materials and articles skin contact is acceptable: clean gloves will generally be used, skin will be kept visibly clean, and breaks in the skin will be dressed so as to prevent contamination with beryllium particulate.



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- Skin contact is permitted when handling clean beryllium containing articles.

OSHA 29 CFR 1910.1200(c) Hazard Communication:

Definitions. Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, *e.g.*, minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

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- Clean gloves will generally be used,
- Skin will be kept visibly clean, and
- Breaks in the skin will be dressed so as to prevent contamination with beryllium particulate.

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- Skin Protection
 - Impervious gloves (e.g., disposable nitrile, vinyl) are worn when there is a potential for hand contact with beryllium particles or process solutions
 - General leather and kevlar knit gloves do not provide protection from particle penetration
- Impervious gloves are worn under other secondary work gloves (leather, chemical, kevlar)

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- Skin Protection
 - Long-sleeve work clothing is worn when there is a potential for incidental arm contact with beryllium particles or process solutions
 - Neck and face protection is used during dusty operations when there is a potential for incidental skin contact:
- Melting & casting, furnace rebuilding, baghouse maintenance, demolition, etc.

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- Long-sleeve work clothing is worn when there is a potential for incidental arm contact with beryllium particles or process solutions
- Neck and face protection is used during dusty operations when there is a potential for incidental skin contact



Keep Beryllium Off the Skin

- Here is what you should know:
 - The potential health effects of exposure to beryllium.
 - Visible beryllium-containing particles and solutions on the skin:
 - Can contribute to personal exposure to airborne beryllium,
 - Can result in beryllium being transported to other work areas potentially contributing to the exposures of co workers, and
 - Can result in beryllium being transported off plant site potentially resulting in exposure to friends and family, the community, service providers, material transporters and down stream processors.
 - Solutions used in processing beryllium-containing materials such as machining oils and coolants can contain small beryllium particles while pickling acids and rinse waters can contain beryllium in solution. Both can result in contact with the skin.

Keep Beryllium Off the Skin

Here is what you should do:

- Provide reusable or disposable work clothing to employees, as appropriate:
 - Shoes and socks, or shoe coverings/booties;
 - Gloves;
 - Hats or head coverings; and,
 - Long-sleeve shirts and long pants, or coveralls.
- Provide additional personal protective equipment such as impervious gloves, aprons and sleeve coverings wherever the potential exists for beryllium-containing particles and solutions to come into contact with skin or work clothing.
- Do not allow sleeves to be rolled-up on long sleeve shirts and coveralls.

Keep Beryllium Off the Skin

Here is what you should do:

- Ensure that adequate provisions for cleaning skin are in place and that cuts, rashes, abrasions, and breaks in the skin are treated and dressed in a manner that prevents contact with metal particles and process solutions.
- Train employees on the importance of skin cleanliness and the importance of maintaining cuts, abrasions, and skin breaks in a clean and covered condition.
- Instruct workers to practice good personal hygiene by washing hands, arms and face before eating, drinking, smoking, putting on protective equipment, or leaving the work area or the plant site.
- Provide and require workers to shower and wash hair if skin or hair contact with beryllium-containing particles and solutions can occur.
- Develop leading and lagging measures to ensure work practice controls designed to prevent skin contact with beryllium-containing particles and solutions are, and remain effective.