

Frequently Asked Questions about Beryllium and Housekeeping FAQ 303

What is an appropriate guideline for surface cleanliness in beryllium work areas?

Materion Ceramics Inc. assesses the effectiveness of its housekeeping program by using a standard of “visibly clean”. This involves having procedures in place and observed that keep surfaces in beryllium work areas free of visible contaminant accumulation.

Is it important to keep dust containing beryllium from being tracked out of the workshop?

Yes. Procedures and work practices to control and minimize the migration of visible dust containing beryllium outside the work zone where the dust was generated need to be implemented and enforced. Materion Ceramics Inc. believes that controlling beryllium dust at the source remains the most effective way to control potential secondary exposures to persons not engaged in the processing of beryllium-containing products. Complete control of dust at the source is not always technologically feasible; therefore, a program that emphasizes good housekeeping and personal protective equipment can reduce the potential for secondary exposure of workers, contractors and visitors. Those handling beryllium and beryllium-containing materials in ways which generate particulate containing beryllium need to utilize engineering and work practice controls to keep beryllium work areas clean and to keep particulate containing beryllium off the skin, off of clothing, in the work process, in the work area and on the plant site.

Do I need to know if visible dust contains beryllium?

If you suspect or are uncertain whether visible dust contains beryllium, it is generally prudent and cost effective to simply clean up the dust using a wet cleaning method or a vacuum cleaner equipped with High Efficiency Particulate Air (HEPA) filters. This is a less expensive, more cost effective method than trying to sample the surface to see if the dust contains beryllium. The \$50 to \$100 cost per surface sample can often translate into more than 2 to 4 hours of manpower cleaning time.

Can surface sampling be used to define safe and unsafe conditions?

No. Surface sampling results cannot be used to distinguish between safe and unsafe conditions. The surface sampling methods that have been used for beryllium are highly variable, not repeatable, and have no direct relationship to airborne levels of beryllium or health risk.

Is there any regulation that limits the amount of beryllium on surfaces?

No, there is no general industry regulatory standard for beryllium on surfaces. In late 1999, the Department of Energy (DOE) published its Chronic Beryllium Disease Prevention Program rule which included an operational surface contamination level in beryllium processing areas at DOE facilities. The DOE acknowledged there is no health basis for its operational surface contamination level. The DOE operational surface contamination level was set based on a survey of its facilities’ ability to meet a stated level of cleanliness. The DOE has also

acknowledged the absence of a relationship between surface contamination and concentrations of airborne beryllium. The DOE rule applies only to DOE facilities and certain DOE contractors. It does not apply to general industry.

Can I get chronic beryllium disease (CBD) from skin contact with beryllium or beryllium-containing materials?

No. Handling beryllium and beryllium-containing materials in solid form cannot cause CBD and poses no special health risk. CBD requires an inhalation exposure to particulate containing beryllium.

Can dust containing beryllium on a surface predict airborne dust levels?

No. It is well established that airborne beryllium levels cannot be predicted from surface dust. However, it is simply good work practice to use procedures and work practices that prevent visible surface dust from being blown back into the air. Compressed air should not be used to clean in areas where visible dust containing beryllium is present. Man-cooling fans should not be placed where it can disrupt visible dust or an operation using local exhaust ventilation.

Is it unusual to find beryllium in dust?

No. Most dust contains beryllium because beryllium is found naturally in soil and rocks throughout the world. Beryllium also occurs naturally in ground water, surface water and foods.

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.berylliumssafety.com.