06 September 2023

Be Responsible
Beryllium Product Stewardship

Dear Reader,

Welcome to our Easy Guide Blast. In a few words we would like to introduce the content of our Beryllium-containing materials guide on **SANDING, GRINDING BUFFING & POLISHING OPERATIONS**.

CONTEXT OF THE BE RESPONSIBLE PROGRAMME

BeST
Beryllium Science & Technology Association

As you may know, the Be Responsible Programme was launched by the Beryllium Industry in an effort to advance the science of beryllium health and safety as well as protect beryllium workers and their close entourage.

The Beryllium Science and Technology Association, representative association of key players of the beryllium industry, and its members stress that substantial uncontrolled workplace exposure to beryllium airborne particles can present a potential health and safety risk to employees.

We will be sharing with you information on sanding, grinding, buffing and polishing exposure control. This is the fourth of nine guides on specific processes provided by the Be Responsible Programme.

What to achieve

The inhalation of beryllium-containing dust, mist or fume can cause a serious lung condition in some individuals. The use of engineering and work practice controls are the preferred methods of controlling exposure to beryllium-containing particulate reliably below the national occupational exposure limit (OEL) applicable in your country for airborne beryllium.

Exposure during sanding, grinding, buffing and polishing operations Sanding, grinding, buffing, lapping and polishing of beryllium-containing alloys are considered as likely inhalation hazard operations. Consequently, effective controls must be implemented.

What controls to implement

The degree of hazard varies depending on the form of the product and how the materials is processed and handled.

1st action: Read the product Specific Safety Data Sheet (SDS).

2nd action: Use wet methods. The proper use of machining fluids is generally an effective method to reduce the generation of airborne particulates of beryllium. Indeed, machining fluids are used to lubricate and cool the cut and to flush away resulting swarf.

Good to know about wet methods:

1. Care should be given to machining fluids containment and to prevent splashing.
2. Machining fluid will likely contain particulates of beryllium so clean up any machining fluid that may coat the parts or splashes outside of the containment.

3rd action: Local exhaust ventilation (LEV) is required when machining fluids are not being used or not effective in controlling the release of ariborne particulate. The LEV should be positioned as close as possible to the source of generate airborne particulate. The type and capacity of LEV will depend on the speed of the particle generation.

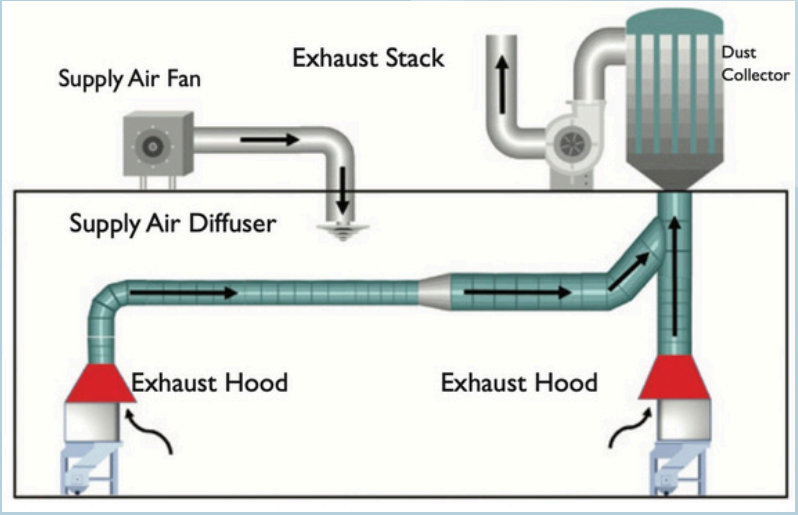
Good to know: Some operations (hand grinding, roto tools) should be conducted in a ventilated enclosure designed to contain all particulate due to the random nature of the particle generation.

Notes

What else to consider

Direct process exhaust air through a High Efficiency Particulate Air (HEPA) filtering device to the outdoors.

Cutting variables such as speeds, feeds and tools to be considered.



Exhaust ventilation

Notes

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Golden rule 1
As always, personal protective equipment, maintenance, housekeeping and workplace exposure characterisation must be implemented.

Golden rule 2
BeST recommends that quantitative and qualitative exposure assessments be conducted by a qualified industrial hygienist or occupational health professional.

Golden rule 3
In case of doubt, always reach out to your supplier for additional guidance.

Check out the full sanding, grinding, buffing and polishing operations guide here.

Notes

WANT TO KNOW MORE?
Check out our dedicated website www.berylliumsafety.eu in all European languages or get in contact with us at info@beryllium.eu

WHAT ABOUT THE OTHER GUIDES?
We will continue to provide similar Easy Guide Blasts for all our Be Responsible Guides in the coming months on a regular basis so keep an eye out for our emails! Previous Easy Guide Blasts are available here.