

### BERYLLIUM

OSHA (NIOSH has adopted the new OSHA PEL)

.2 Micrograms per Cubic Meter

#### RESPIRATOR RECOMMENDATIONS



**Full facepiece (Elastomeric)**  
APF = 50  
Needs to be fit tested

**Hood Powered Air-Purifying Respirator (PAPR)**  
APF = 25

Up to 0.0002 mg/m<sup>3</sup> (milligrams): TWA (8 hours)  
.2 Micrograms per Cubic Meter

Up to 0.002 mg/m<sup>3</sup>, STEL (15 minutes)  
2.0 Micrograms per Cubic Meter

(APF = 10) Any air-purifying full facepiece respirator equipped with an N95, R95 or P95 filter. The following filters may also be used: N99, R99, P99, N100, R100 and P100.

Up to 0.005 mg/m<sup>3</sup>:  
5 Micrograms per Cubic Meter

(APF = 25) Any powered air-purifying full facepiece respirator equipped with a hood or helmet and a high efficiency (HEPA) filter

*Note: Pictured is an APF 50 which takes an N100, R100 or P100 filter. The APF 10 will also work as well per the above comments by NIOSH.*

#### PERSONAL PROTECTION/SANITATION

**Skin:** Prevent skin contact

**Eyes:** Prevent eye contact

**Remove:** When wet or contaminated

**Wash skin:** Daily

**Change:** Daily

**Provide:** Eyewash

### CRYSTALLINE SILICA

NIOSH - REL (new OSHA PEL is same)

50 Micrograms per Cubic Meter

#### RESPIRATOR RECOMMENDATIONS



**Half mask (Elastomeric)**  
APF = 10  
Needs to be fit tested

**Loose-Fitting Powered Air-Purifying Respirator (PAPR)**  
APF = 25

Up to 0.5 mg/m<sup>3</sup> (milligrams): TWA (8 hours)  
500 Micrograms per Cubic Meter

N/A STEL

(APF = 10) Any particulate respirator equipped with an N95, R95 or P95 filter (including N95, R95 and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 or P100.

Up to 1.25 mg/m<sup>3</sup>:  
1250 Micrograms per Cubic Meter

(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate filter

#### PERSONAL PROTECTION/SANITATION

**Skin:** None

**Eyes:** None

**Remove:** None

**Wash skin:** None

**Change:** None

**N/A**

### AMORPHOUS SILICA

NIOSH - REL

6,000 Micrograms per Cubic Meter

#### RESPIRATOR RECOMMENDATIONS



**Half mask / Dust mask**  
APF = 10  
Needs to be fit tested

**Half mask (Elastomeric)**  
APF = 10  
Needs to be fit tested

Up to 30 mg/m<sup>3</sup> (milligrams): TWA (8 hours)  
30,000 Micrograms per Cubic Meter

N/A STEL

(APF = 5) Any quarter-mask respirator.

Up to 60 mg/m<sup>3</sup>:  
60,000 Micrograms per Cubic Meter

(APF = 10) Any particulate respirator with an N95, R95 or P95 filter (including N95, R95 and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100 and P100

#### PERSONAL PROTECTION/SANITATION

**Skin:** None

**Eyes:** None

**Remove:** None

**Wash skin:** None

**Change:** None

**N/A**

## ADDITIONAL INFO

- Beryllium is listed on the SDS of coal and copper slags.
- Crystalline Silica is listed on the SDS of silica sand.
- Amorphous Silica is found in glass.
- NIOSH recommends that during Abrasive Blasting the blaster must wear an APF 1000 (Abrasive Blast Hood). This type of Respirator would protect a worker for all three chemicals.
- The comparison chart is to show the NIOSH recommendations for workers who are not blasting that are exposed to the dust from abrasive blasting, particularly in enclosed spaces. These workers include pot tenders, clean-up crews and inspectors, both government (OSHA, DOT, Military) and industry (e.g. Coating/Paint companies).

## DEFINITIONS

mg/m<sup>3</sup> = milligrams per cubic meter

ug/m<sup>3</sup> = micrograms per cubic meter (1000xmg/m<sup>3</sup>)

STEL = Short Term Exposure Limit (15 minutes)

PEL = Permissible Exposure Limit

REL = Recommended Exposure Limit

TWA = Time Weighted Average = 8 hours

NIOSH CHEMICAL POCKET GUIDE:

<https://www.cdc.gov/niosh/npg/npgd0054.html>



# NIOSH POCKET GUIDE TO CHEMICAL HAZARDS

## COMPARISON CHART

*A recap of the current NIOSH Respirator & PPE recommendations for chemicals found in three common blast medias as listed on the NIOSH Chemical Pocket Guide*