

## RADIATION ATTENUATION BY THE SHIELDING COATS & SUPERFICIAL CONCRETE DENSIFICATION

The KF- $\alpha\beta\gamma$  layer\* and KF-G sprays were applied on the 3.0 (cm) thick concrete slabs\* adequate to the slab #1. The collimation camera was loaded by the source of radiation of Co 60 1.33 MeV, that's why with another industrial or primordial sources of radiation the results may vary, but not lower.

Tested materials:	Detected Readings of radiation:	Attenuation of radiation relatively to #1:
#1. 3.0 [cm] of concrete slab	3.4 $\mu$ Sv/hour;	0.00% (control reading)
#2*. Single spray of KF-G on a slab #1	3.09 $\mu$ Sv/hour;	9.12%
#3*. Second spray of KF-G on a slab #1	2.92 $\mu$ Sv/hour;	14.12%
#5. KF- $\alpha\beta\gamma$ layer at 3.0 [cm] on a slab	1.5 $\mu$ Sv/hour;	55.88% (concrete slab at 3 cm thick)
#6. Lead brick at 3.0 [cm] thick	1.168 $\mu$ Sv/hour,	65.65%

Application of KF-G provides concrete densification and, therefore, according to the Compton's effect, reduction of radiation penetration through the concrete slab.

According to the concrete floor present conditions, application of KF-G is recommended to restore floor abrasion and liquids impermeability resistances, and to suppress radiation up to 10% by single KF-G spray and up to 14% after second spray, which is measured as it shown above for #2 and #3.

Use of KF-G by 400 grams per 1 Liter of water to spray per 1 m<sup>2</sup> by one or two times to achieve targeted result of radiation attenuation.

Attention: KF-G application is more effective for the aged concretes or concretes weakened by cycling crumbling.

\* - slabs were polished by plastic hand brush after 40 minutes of KF -G application.

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