



KALMATRON[®] Corporation

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KALMATRON[®] KF- $\alpha\beta\gamma$



We are offering radioactive shielding material KALMATRON[®] KF- $\alpha\beta\gamma$ for attenuation of α , β and γ radiation. This is the cementitious powder with dry density 2,500 Kg/m³ and wet density 3,500 Kg/m³. Designed for repair of old and building of new structures, restoration of material's attenuation and suppressing of the sources of radioactive contamination. KF- $\alpha\beta\gamma$ is applicable as a shielding coat, admixture to concrete mix, and to be strewed in a powdered form.

■ APPLICATION OF KF- $\alpha\beta\gamma$ AS A COATING

1. Add **1** part of water into **4** parts of KF- $\alpha\beta\gamma$ by volumes and mix it for $\frac{1}{2}$ minute.
2. Try a few applicable thickness layers of KF- $\alpha\beta\gamma$ at **5 mm**; **10 mm**; **15 mm**; **20 mm**; etc., to get stable attenuation of radiation.

■ APPLICATION OF KF- $\alpha\beta\gamma$ AS AN ADMIXTURE

1. Prepare conventional concrete mix with **10 Kg/m³** of **KF-A** to provide features of High Performance Concrete for low shrinkage and liquid impermeability.
2. Use testimonial dosages of KF- $\alpha\beta\gamma$ beginning from **25 Kg/m³**; **50 Kg/m³**; **75 Kg/m³** and **100 Kg/m³** to obtain complete attenuation of radiation

■ APPLICATION OF KF- $\alpha\beta\gamma$ BY STREWING

1. Strew the dry batch of KF- $\alpha\beta\gamma$ powder on the source of radiation and take control readings.
2. Strew KF- $\alpha\beta\gamma$ dry powder until safety requirements will be achieved.

■ COMPARATIVE DATA

ATTENUATION OF RADIATION

- ⇒ by concrete is 40% less, with same mass of application, than KF- $\alpha\beta\gamma$.
- ⇒ by lead is 1.35 times higher, with same mass of application, than KF- $\alpha\beta\gamma$.
- ⇒ by metal-polymer's based compositions are lower by 26% than KF- $\alpha\beta\gamma$.

ECONOMICAL

- ⇒ concrete is 36% more expensive, with the same type of application, than KF- $\alpha\beta\gamma$.
- ⇒ lead is 120% more expensive, with the same type of application, than KF- $\alpha\beta\gamma$.
- ⇒ metal-polymer's based compositions are 3 times more expensive, than KF- $\alpha\beta\gamma$.

ADVANTAGES

- ⇒ Provides highest attenuation of radiation without increasing structural weight.
- ⇒ Does not require any special conditions, uniform, equipment or skills for handling, storage and application.
- ⇒ Applicable by any known concrete application technology.
- ⇒ Resistance to radiation penetration provided for any source of radiation.
- ⇒ Available for manufacturing of containers and wall blocks.
- ⇒ Acceptable for greasy and wet conditions on the surface of application.

For higher durability of radioactive shielding structures we'd like to propose to apply **KALMATRON[®] KF-A** admixture together with **KF- $\alpha\beta\gamma$** . It will be guaranteed for high climate resistance, chemical protection, non-cracking and waterproofing of your concrete with the highest attenuation of radiation.

We are ready to provide the samples of KALMATRON[®] KF- $\alpha\beta\gamma$ and KALMATRON[®] KF-A, recent test results and other valuable information to make your project more humanitarian with environmentally friendly concepts.