



BARYTES AGGREGATES FOR BARIUM CONCRETE

Barytes Aggregates are off white barytes, specially selected and graded for use in barytes concrete.

The usual mix design for barytes concrete is 2 parts coarse barytes (20mm) to 1 part fine barytes (5mm) by weight. This mix should then be used 9 parts barytes aggregate to 1 part cement, again by weight.

General requirements per cubic metre of concrete are 3115 kg barytes aggregate mix, 365 kg cement and, as a guide, 157 litres of water, although this will vary depending on the condition of the aggregates. Using this mix design, a density of 3500 kg/m³ should result with a compressive strength of 21MN/m² (3000 psi).

The following recommendations should be used to ensure the integrity of the protection :

1. Careful supervision must be exercised to ensure that the exact proportions of barytes, cement and water are used. Failure to observe the correct mix may result in a lower density and a possible radiation leak.
2. The barytes, cement and water must be well mixed before pouring.
3. The concrete must be thoroughly rod-vibrated or hand-rammed to exclude cavities in the finished concrete. Cavities mean the loss of density and the possibility of radiation leakage.
4. Each day's work must be finished in a chevron to avoid through going cracks which would permit the passage of radiation. (Subject to the instructions of the site engineer)
5. The normal precautions are taken in the manufacture of concrete during adverse weather conditions.

The data given on this sheet is based on test results believed to be representative of the product and should not be interpreted as a binding specification.

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