FACT SHEET

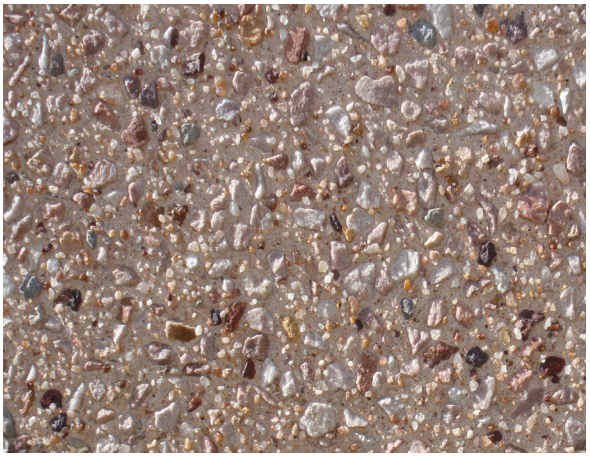
Finishes - Exposed aggregates in precast

Aggregates are comprised of coarse gravel or crushed rocks such as limestone or granite, together with fine aggregates such as sand. The size, shape and proportions of the aggregates in the mix will affect the workability, placement, cohesiveness, strength and durability of the finished precast concrete product.

The aggregates remain hidden by a thin layer of cement paste; they can be exposed by the use of retarders, or by grinding, water washing, sand (grit) blasting, acid etching or bush hammering.

If the mix isn't coloured with pigments, the fine aggregates, namely sand, will determine the final colour. On the other hand if coarse, exposed aggregates are used proud of the surface, they will dominate the colour and appearance of the final product. Sharper, more angular exposed aggregates will produce more shadow and trap dirt, whereas rounded, smoother shapes will give a softer appearance and be easier to clean. Aggregates can also be honed or polished to achieve a more prestigious look that reflects light, and the use of decorative or different coloured stones can add interest to the final product.

The best way of getting a good result is to meet with the engineer and precast manufacturer, order some trial samples before deciding on one you like (with the engineer's approval) that the precaster can produce and finish for the price. The precaster can then record the details of the mix design which means avoiding the need to specify aggregate sizes and proportions.



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The architectural market is spoiled for choice when it comes to the selection of aggregate that can be used in precast. According to Steve Falland from Barossa Quarries, over 20 unique colours of marble or granite are available and only sound, clean stone is selected before being crushed and screened to exact sizes as specified. The crushing plants are carefully cleaned to ensure cross-contamination is avoided between different colours of stone.