



Ciment Fondu

Ciment Fondu is a specialist concrete product designed to specifically suit sculpture outdoor applications.

In the early 1900's there was a move toward using concrete for a variety of construction and ornamental uses, however the development of a specialist ornamental grade of concrete was not realised until the mid 1950's with the development of the two Ciment Fondu products.

Ciment Fondu is a specialist grade concrete (not at all similar to Portland Cement), it gives a more robust structure than plaster and will also take a variety of surface treatments too.

The cement is made by fusing together a mixture of a calcium-bearing material (normally calcium oxide from limestone) and an aluminium-bearing material (normally bauxite for general purposes, or refined alumina for white and refractory cements).

The liquified mixture cools to a vesicular, basalt-like clinker which is ground alone to produce the finished product.

Although heavier than plaster or Jesmonite, Ciment Fondu can be cast with glass fibre to make it a little lighter and can be cast in large hollow sections to build remarkable structures.

The product is available in two basic mixes, both of them are Aluminous cement, mixed in the same way with a mixture of sand and water to make up a "Goo".

It is important to mix the product very carefully – attempts to alter the chemistry of the "Goo" normally have less than successful results.

Ciment Fondu in its standard form is a dark grey bauxite mix which will give good quality accurate castings, that are both strong and weather resistant.

SECAR 71 is a bright white alumina cement, with all of the same properties as its close cousin but more suited to casting with colours and when the desired result is pure white.

Both products are mixed on a 2,6 & 1 mixture –

Cement – 2 volumes Sand (or aggregates) – 6 volumes Water – 1 volume

The materials should always be added by accurate volume – a 900 ml mixing beaker is ideal.

It is possible to mix the two cement products together – you can also mix them both with Portland cement too (with experience).

Always use dry aggregates or sand – if the sand is wet, then it should be dried out before mixing.

The choice of sand or aggregate is very much dependant on application.

Silver Sand is ideal for white cements, but you can also use a blend of fine and coarse marble filler – the resulting cast will be very pale and with marble filler bright white.

Soft Sand is more ideal for the darker Ciment Fondu, or if you are intending to colour the cement casting – otherwise it does tend to yellow the cast if using the Secar 71.

Sharp sand is much coarser and gives a good texture, it is also considered to give more structural strength for larger castings but it is not really suitable for Secar 71.



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Mixing:

Only mix enough for approx. an hours work and do not try to add more water to the product as it stiffens up. Although it might cure the resulting cast will NOT be as strong.

When adding the mix into a mould the mixture should be firmly tamped down into the mould and heavily compacted, this compacting process is vital to ensure a good strong structure and that all air bobbles have been eradicated.

Once tamped into the mould the surface of the cement should be damped with water – do not confuse dryness with curing – the product will take several days to fully cure, during which time it is better kept at least damp. Ciment Fondu and SECAR 71 take at least 24 hours to fully cure!

We offer a very helpful booklet from our web page and our shops at both Thatcham and Warren St in London and our technical staff can always offer a range of advice on using the product to its best.