

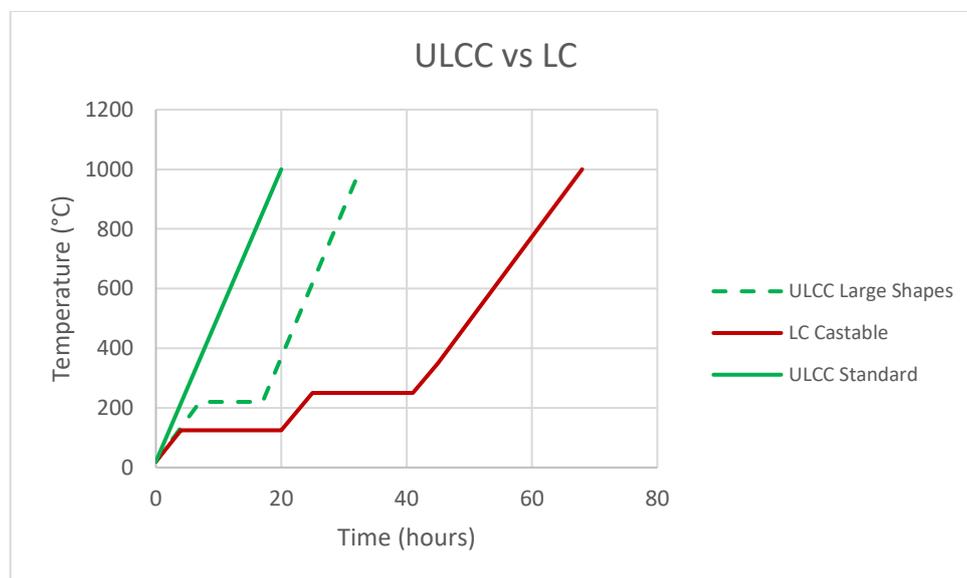
Product description HASLE D37NC SC

HASLE D37NC SC is a Gel bonded Ultra Low Cement Castable (ULCC). It is based on Mullite and SiC for a combination of strength and thermal shock resistance while maintaining good resistance against alkali attacks.

The **Silica gel bonding system** used in D37NC SC is “**all in the bag**”, meaning that it is included in the castable as opposed to a silica sol bonded system that comes separate and needs special attention transport and temperature-wise. When using D37NC SC you just add water, mix, and cast as with a regular refractory castable.

The gel bonding system provides **excellent high-temperature properties** and has the added benefit of **easy and fast dry-out procedures** compared to traditional and LC castables. This, in combination with the addition of dry-out enhancing fibers, means that a less complicated and much faster heating profile can be used.

For castings < 300mm a continuous heating rate of 50°C can be used from room temperature to final operating temperature. For larger shapes and walls > 300mm, HASLE recommends adding a single hold time of 10hours at approx. 200°C to minimize the risk of vapor pressure spalling.



From the dry-out profile shown above, it is clear that substantial time savings can be achieved in installations using ULCC castable when compared to LC (Low Cement) Castable. Further to this, the ULCC standard **dry out profile is much less demanding** technically than the multistep profile of LC (Low cement).

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While Low Cement Castables require two hold times to safely remove first the free water (at approx. 125°C) and thereafter chemical bound water (at approx. 250°C), the ULCC bonded system used in D37NC SC requires none or in the case of thick linings or shapes a single hold time to safely evacuate water during dry-out.

The silica gel bonds of D37NC SC are less vulnerable to alkali attack than the cement bonds in LCC. In combination with a balanced alumina-silica ratio, this provides D37NC SC with good alkali resistance. This can be seen from the Cup test shown below:



The strength of the silica gel bonding system also means that the **strength of D37NC SC rises with increased temperature**. The high strength bonds also help to give D37NC SC a **good abrasion index** measured at only 3,1cm³ loss at 90° according to ASTM C704.

Shelf Life

HASLE D37NC SC has a shelf life of 6months after production. After this, prolonged setting times can be expected.

Application:

HASLE D37NC SC can be used in most high temperature processes that benefits from an alumina silicate castable with high Silica Carbide content. Good workability and easy dry out would make it a good choice for final installations e.g. Nose Ring in cement plants as faster dry-out will allow fast restart of production. D37NC SC could also be considered for Burner Pipe, Kiln outlet, Bullnose and Cooler in cement plants.

The SiC content makes D37NC SC suited for incinerators and boilers where high thermal conductivity is needed. SiC also provides resistance to sulfur containing slags.

The easy and fast dry out would also favor D37NC SC for fast repairs and for installation where access to technical equipment for dry-out is limited.