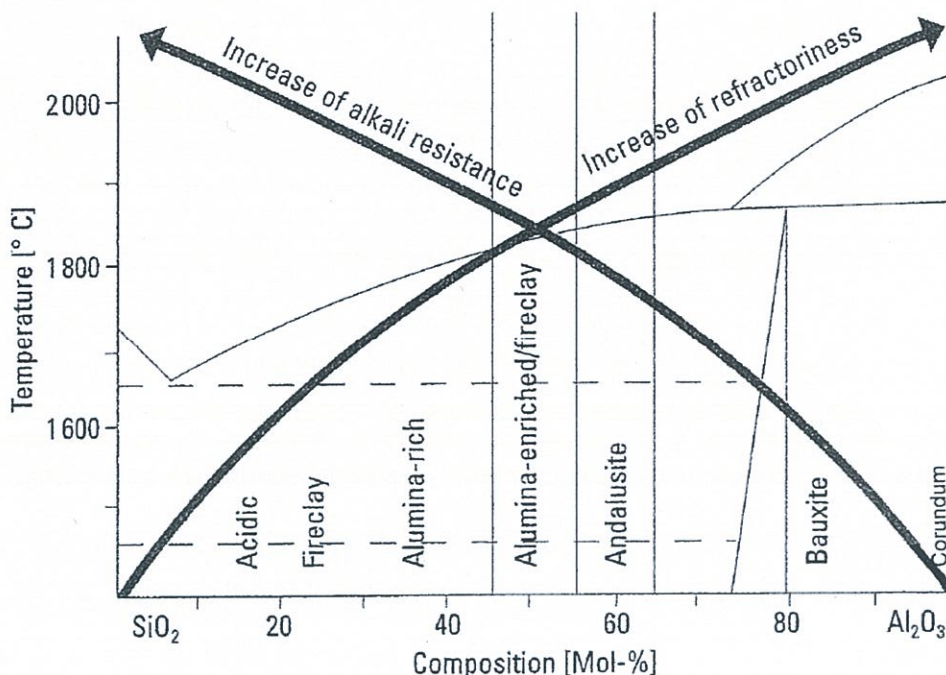


Composition of HASLE Low Cement Castables

At HASLE Refractories we combine several refractory minerals in our Low Cement Castables (LCCs) to ensure the best performance against various challenges in the industries we serve. Our LCCs are characterized by having a very dense and strong matrix, and we focus on grain size distribution as well as chemical composition. The most common used HASLE products in cement plants are low-cement alumina-silicate castables with 40-65% Al_2O_3 and 30-50% SiO_2 which make the castables robust to mechanical and chemical stresses, abrasion and thermal shock at the same time. At cement plants the temperatures will normally not exceed 1400°C and therefore high refractoriness is not required. On the contrary, high resistance to alkalis is essential and the importance of chemical resistance is increasing with the increasing use of alternative fuels. Silica-rich phases in the refractory lining will embed alkali-gasses and slow down erosion caused by liquid slag, as the Silica will increase the viscosity of the slag. The relation between chemical composition, alkali-resistance and refractoriness is shown in the figure below.



Careful casting, drying and heating ensure low porosity which enhances the performance of the materials even further; especially when it comes to minimize the risk of build-up formation on the refractory. If it is not possible to control casting and heating on site, we recommend precast and preheated elements from our workshop which have a unique dense and smooth surface.

Michael Bladt
Michael Bladt
Managing Director, CEO



Tina Svendsen
Dr. Tina Svendsen
Product Manager, Head of R&D

WE PROTECT YOUR PROCESS