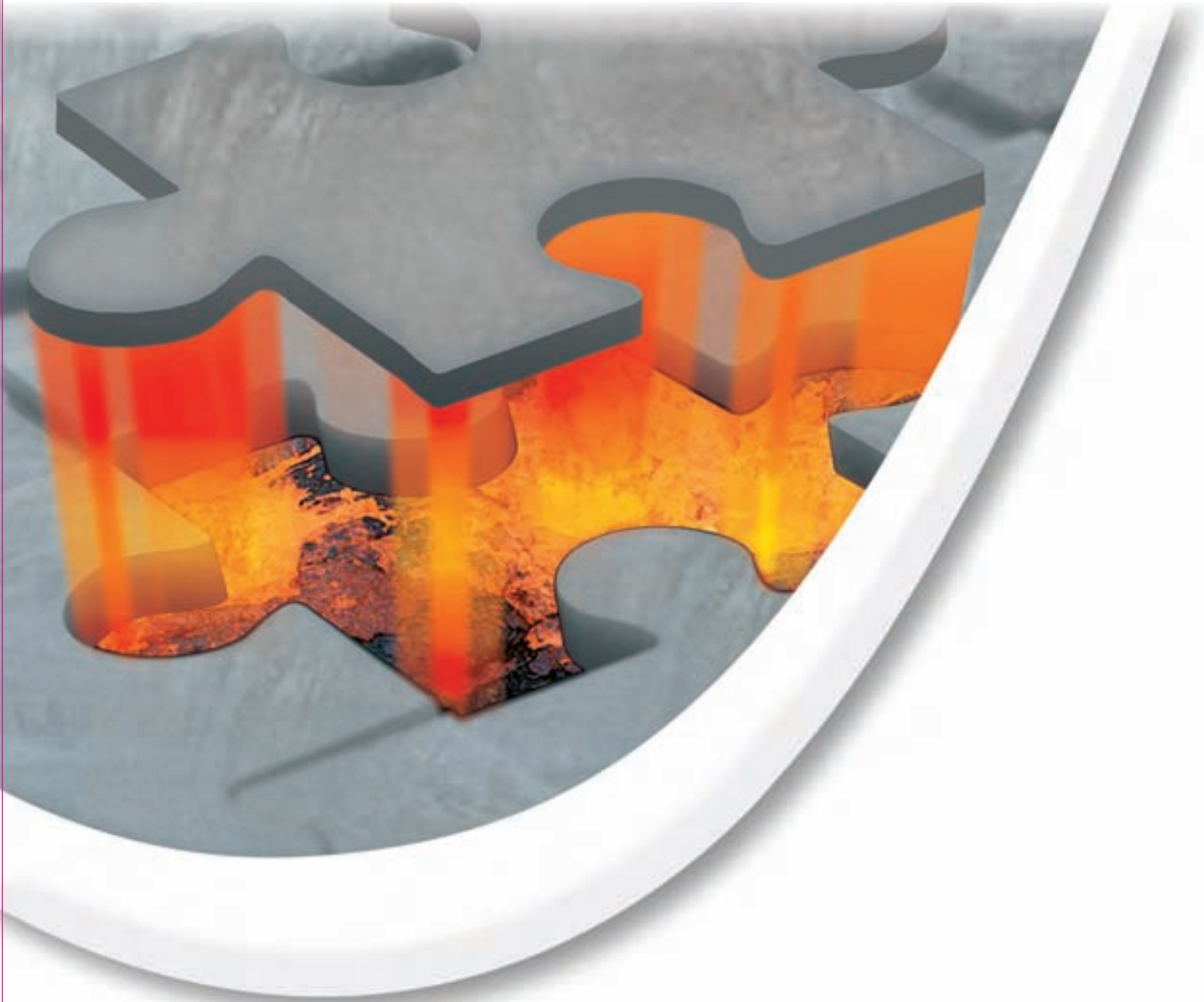




*For the Refractory Industry*



Providing Innovative Additives



# A new alternative for **refractory** additives

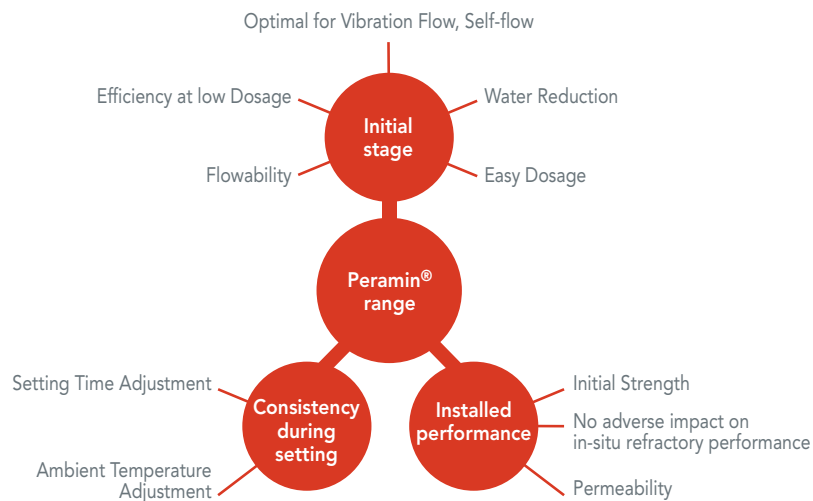


Peramin® is a company specialized in the design, manufacturing and sales of powder additives for a wide range of formulations.

Peramin® became a wholly owned subsidiary of Kerneos in June 2006\* and was initially dedicated to their core competency of developing additives for the construction market, but with the additional focus on calcium aluminate cement based systems.

Today, with the in-depth refractory knowledge and expertise of Kerneos, Peramin® extends its range to include additives specifically designed for and tested in refractory applications.

The Peramin® range offers additives with key performance at each stage of the hardening process:



## Product range to include:

- **Flow additives** for a complete range of refractory systems,
- **Set modifying and gelling additives** to support specific placement techniques,
- **Viscosity modifiers** to enhance the placing performance of gunning products.

Peramin® additives for the Refractory Industry are sold exclusively through the Kerneos sales network.

This capitalizes on the benefits of SECAR® products:

- Global sales network with your usual contact,
- Technical support with the technical developers,
- Efficient supply chain with high reliability,
- Clear market focus on refractory castables and its requirements.



\* Peramin® AB was created in the late 70's inside the Swedish Perstorp group.

# Quality and Commitment

- **Three decades of experience** centred around the design and development of powdered organic additives.
- Additives designed **to improve the key applications and performance properties** in conjunction with simple or sophisticated hydraulic binders.
- Development of specific additives with:
  - **Consistent quality,**
  - **Efficiency at low dosage,**
  - **Formulation flexibility.**

Supplementary information is available on the Peramin® website and on the SECAR® website:

• [www.peramin.com](http://www.peramin.com)

• [www.secar.net](http://www.secar.net)



# Peramin® AL Fluidifying Agents

With the development of Low Cement Castables (LCC), new types of additives have been designed to offer more and more formulation levers to refractory castables.

**Peramin® AL 200** and **Peramin® AL 300** are fluidifying agents specifically designed for low cement alumina and alumina-spinel based castables. They offer excellent flow properties at a reduced water demand in conjunction with a regulated hardening profile. When combined with a rheologically optimized castable, **Peramin® AL 200** and **Peramin® AL 300** enable the adjustment of a low cement castable between vibration and self-flow consistencies purely through the regulation of the water addition.

**Peramin® AL 200** provides and maintains excellent flow characteristics for more than 60 minutes even at elevated ambient temperatures.

**Peramin® AL 300** also provides excellent flow but delivers more rapid strength development, critical for installations performed at low ambient temperatures.

The two additives can be used in combination to optimize the rheology and placing characteristics of the LCC as desired. The recommended total addition rate is 0.1 % by mass of the drymix.

The technical advantages of using **Peramin® AL 200** and **Peramin® AL 300** are:

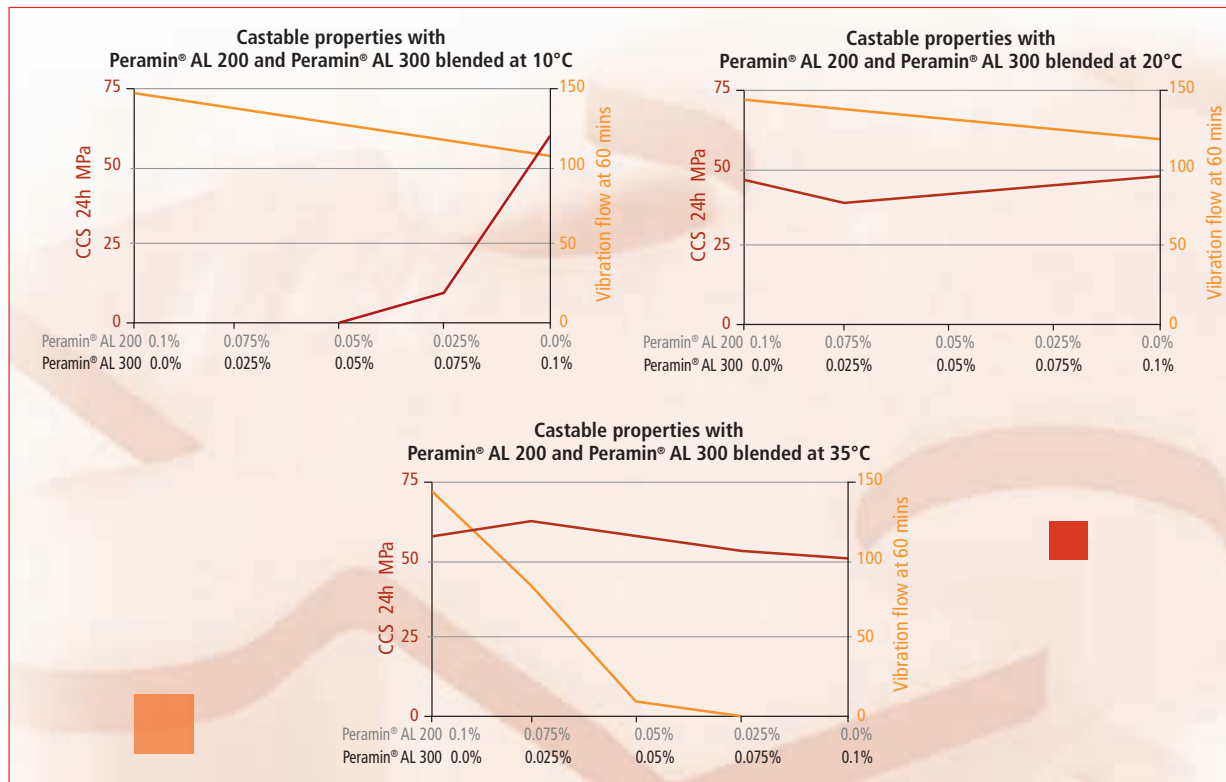
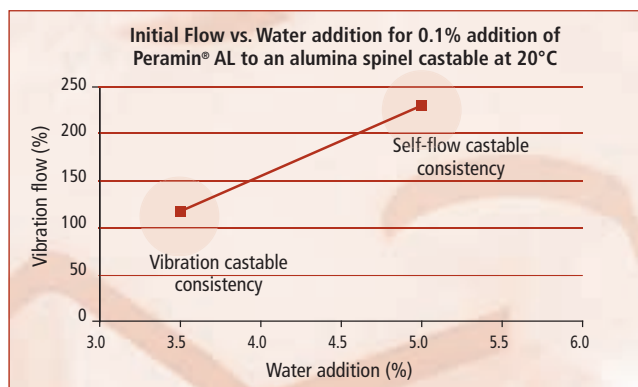
- Producing the final castable product is easier since the additive dosage is manageable. The dose is high enough to be accurately weighed by an automatic dosing system – no need to rely on manual dosage.
- Improved production consistency and reliability. Peace of mind that the additives are always added to the castable and are added at the correct dosage.
- Castable performance enhanced:
  - Provides rapid wet-out time to aid mixing and water dose determination on site.
  - Excellent flow can be achieved at lower water demand which ensures optimized placing performance and optimized in-situ castable performance.
  - Efficient and rapid air removal during consolidation either by vibration or self-flow to ensure optimum placed structures.
- Final product reliability on site is improved since **Peramin® AL 200** and **Peramin® AL 300** guarantee the desired hardening profile.
- These additive systems do not negatively influence the refractory properties or high temperature performance of the castable.

## Analysis – Typical Values

	Peramin® AL 200	Peramin® AL 300
Type	Fluid	Rapid
Appearance	Off-white powder	Off-white powder
Odor	None	None
pH (10% water dispersion)	6.0 – 8.0	6.0 – 8.0
Specific gravity (g/cm <sup>3</sup> )	1,450 - 1,550	1,450 - 1,550
Bulk density (g/cm <sup>3</sup> )	550 - 750	550 - 750
Shelf life	12 months	12 months
Packaging	15 kg bag 5 kg plastic bucket	15 kg bag 5 kg plastic bucket

### Packaging and delivery:

- Available in 5 kg plastic bucket; an economic way to use high value additives and to store them in the best conditions.
- Available with SECAR® orders.



All the names mentioned are trademarks of Kerneos and its subsidiaries.

Kerneos warrants that the products comply with the specifications stated in the commercial data sheet to the exclusion of any other warranty, expressed or implied. Kerneos makes no representation or warranty of any kind, either expressed or implied, as to the merchantability or fitness for a particular purpose or use of the products. The warranty shall be limited to the replacement of the non-conforming products or, at Kerneos option, the refund of the purchase price. Any technical advice, recommendations or information are given based on Kerneos current knowledge and experience of the products and are deemed to be accurate. However, Kerneos undertakes no liability or responsibility of any kind in respect thereof. Users are invited to check that they have the latest version of this document.

# Worldwide network

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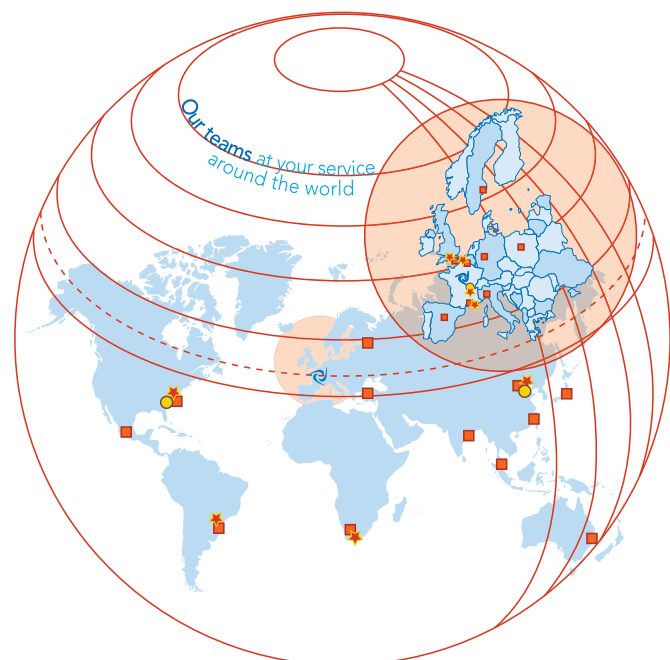
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