



## FENOTEC\*

Alkaline phenolic binders for ferrous and non ferrous foundries

VESUVIUS



# FENOTEC

## Self set binders

The FENOTEC alkaline phenolic cold set resin process is a two part sand binder system based on a water soluble alkaline resin solution and a range of organic ester hardeners. These hardeners provide a comprehensive range of reaction times, ranging from 1 minute to 3 hours.

FENOTEC can be used for the production of a wide range of castings in a wide range of alloys. Suitable for both cores and moulds, resin additions are typically 1.0 to 1.5% with an optimum ester addition between 18 and 25% of the resin content. FENOTEC can be used with clean dry silica sands, Chromite, Zircon and Olivine sands.



FENOTEC binders offer excellent mould and core properties and easy pattern release

### BENEFITS

- + Very low fume and odour on casting
- + No nitrogen, sulphur or phosphorus related defects
- + Excellent mould and core release
- + Improved castings in virtually all metals
- + Excellent surface finish
- + High mould and core strengths
- + High sand reclamation levels
- + High temperature plasticity

### FENOTEC application

FENOTEC is fully adaptable to all mixing methods particularly to high speed continuous mixers. Batch mixers can be used but an allowance should be made for extended mixing time when selecting the required ester hardener.

Several key development programs have resulted in a range of FENOTEC resin and ester formulations which allow high levels of sand reclamation to be achieved. Foundries are now benefiting from this new technology in terms of consistent high mould strengths, excellent breakdown after casting and improved casting finish.

### FENOTEC binder

Two groups of FENOTEC binder are available based on pure KOH or hybrid KOH/NaOH alkali compounds. KOH based binders are recommended for the most demanding applications such as fast loop moulding lines, as these types of binder give the highest strength development properties.

Hybrid resins offer excellent technical performance combined with economic value and can be used in all general mould and core applications.

Both groups of binder can be used in sand reclamation systems based on normal dry attrition, modern secondary attrition and thermal processes.

### FENOTEC hardener

The hardener product range for FENOTEC binders ensures optimised addition and superior mixed sand bench life to curing time ratios to meet the specific needs of each customer application.

These, in combination with PLC controlled ester blending systems fitted to modern sand mixers ensure the highest degree of productivity combined with low mould and core manufacturing costs.



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