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VESUVIUS

# **NORACEL** Anti-veining additives

Expansion defects such as veining are mainly associated with silicia sands. They result from the penetration of liquid iron into cracks formed during differential expansion of the core during heating. This differential expansion is linked to the  $\alpha$ - $\beta$  phase transition of quartz.

Various sand additives can reduce veining. These are in general, substances that promote plasticity at elevated temperatures either through melting or through reaction with the binder or sand grains.

All NORACEL additives are specifically designed for optimum performance when used in combination with POLITEC\* polyurethane cold-box binders.

## NORACEL M

These additives are blends of different minerals. They are completely free of organic compounds and are especially suited for castings that are prone to gassing defects.

### NORACEL MO

Additives of the MO-type are used for various applications where excellent anti-veining performance and low additive addition rates are required.

### NORACEL W

These additives release a small amount of CO<sub>2</sub> during coremaking and create a honeycomb structure within the cured binder. This enhances the plasticity during casting, helping to prevent veining defects. Application rates are very low, corebox contamination is avoided and no increase in binder additions is necessary. The product is inert and poses no threat to health, safety or the environment.

Rear axle housing and core subassembly



Component of rear axle core package



Rear suspension arm made by means of a core containing NORACEL W



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#### Foseco International Limited

Drayton Manor Business Park, Tamworth, Staffordshire, England B78 3TL Phone: +44 (0)1827 262021 Fax: +44 (0)1827 283725 www.foseco.com Please contact your local Foseco team