

# VL (Ce) 2

## Preconditioning

### Application

VL (Ce) 2 is a treatment agent for the preconditioning of molten cast iron before magnesium treatment. The addition of cerium leads to the formation of Ce-O-S compounds that are stable under atmospheric conditions in the temperature range from 1450 to 1550°C, these compounds cannot be altered by atmospheric oxygen. Cerium oxysulfides are very fine (approx. 1 - 3 µ), round in shape and remain suspended in the molten metal, this is due to their high specific gravity (approx. 6.5 g/cm<sup>3</sup>). They boost the heterogeneous nucleation catalysis. The formation of magnesium oxide and magnesium sulfide (dross) is countered through the removal of oxygen and sulfur in the base iron by cerium before a magnesium treatment.

### Chemical analysis

% Si	58 - 68
% Ca	0.6 - 1.5
% Al	0.6 - 1.5
% Zr	2.0 - 3.0
% Mn	2.0 - 3.0
% Ce	1.8 - 2.2

### Addition rate

The material should be added directly before the magnesium treatment when tapping the molten iron into the pouring stream. The addition of VL (Ce) 2 is oriented both to the cerium requirement of the molten iron for neutralization of the so-called detrimental elements (e.g. Ti, Pb etc.) and the cerium requirement for binding the oxygen and sulfur to cerium oxysulfide. Depending on the properties of the base iron, addition rates of 0.1 to 0.3% by weight, have proven to be sufficient.

A treatment agent free of cerium or cerium misch metal is to be chosen for the magnesium treatment.

### Sizing

0.4 - 2.0 mm

### Packaging

- 25 kg paper sacks on pallet
  - 100 kg steel drum on pallet
- The containers are covered with a protective film.

### Shelf life and transport

VL (Ce) 2 can be stored indefinitely in its original packaging. The effects of humidity are to be avoided. Relevant hazardous substance regulations must be complied with. Our Shipment Handling department can provide further information. VL (Ce) 2 is not a hazardous substance as defined by transport regulations.

The data in this information sheet corresponds to the current state of our knowledge and is intended to provide information on our products and their potential applications. It is not therefore sufficient to assure certain properties of the products or their suitability for a concrete intended use, and does not contain any complete instructions for use. It also does not represent any guarantee of condition and durability and the user is not exempted from testing the suitability and potential applications for the intended purpose. Any extant intellectual property rights must be taken into account. The Environment and Quality Management of ASK Chemicals Metallurgy GmbH is certified and fulfills the requirements of ISO 14001 and ISO 9001. This information sheet shall cease to be valid if a new version is issued.

### Technical properties & economic benefits:

- Preconditioning of molten cast iron
- Improves the nucleation sites in molten cast iron
- Counteracts dross formation

### Product Management Metallurgy

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Status October 2010