



Wünschendorfer Dolomitwerk GmbH

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Burnt Dolomite for Metallurgy

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1. General

Burnt dolomite for the metallurgical industry is a product from natural dolomite burnt in a shaft kiln. Its main components are calcium and magnesium oxides occurring at an almost stoichiometric ratio. A high reactivity is achieved by a special "soft burning" method.

2. Chemical compositions

MgO	Min.	36.0 %
CaO	Min.	55.0 %
SiO ₂	max.	2.5 %
Al ₂ O ₃	max.	1.5 %
Fe ₂ O ₃	max.	1.5 %
Loss on ignition	max.	3.5%
-> Grain size 0 - 1 mm / 0 - 2 mm	max.	7.0 %

3. Reactivity

The dolomite reactivity is regularly tested by the coarse grain titration method

- Coarse grain titration (CGT) (4 n HCl)

CGT	Kiln Caaschwitz	Kiln Wünschendorf
5 min	100 - 140	60 – 80
10 min	140 - 190	80 – 100

4. Physical data

Bulk weight (kg/l) approx. 0.9 to 1.05 depending on grain size

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Burnt dolomite for metallurgy · Quicklime as fertilizer · Pulverized dolomitic lime according to DIN EN 459-1 for soil compaction · DEDOLDES® for animal housing hygiene · Decarbolith for water treatment · Carbonic magnesium lime as fertilizer · Dolomite filler · Dolomite sands · Washed crushed rock and chippings · Base sealing material · Variegated sandstone · Rubble recycling · brick, concrete, bitumen · Concrete recycling 32 mm · Excavated earth acceptance · Earthwork



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5. Grain sizes available

0 - 1 mm	1 - 4 mm	2 - 12 mm	10 - 40 mm
0.2 - 1 mm	2 - 8 mm	4 - 12 mm	10 - 50 mm
0 - 2 mm	2 - 10 mm	10 - 30 mm	20 - 40 mm

Other grain sizes are available on request.

6. Transport

The product must be transported in closed containers, such as TDS rail transport, tarpaulin-covered trucks and bins, Big Bags or 15 kg paper bags.

7. Application

Burnt dolomite is mainly used as metallurgical aggregate in steel production and serves primarily as MgO carrier. By adjusting a favourable equilibrium between the MgO-based refractory linings and the slag the refractory wear can be drastically reduced. The CaO content is useful in almost every case with respect to the almost exclusive lime-basic slag systems of the iron and steel metallurgy.

When the CaO and MgO content is combined, the slag viscosity can be influenced positively. The high reactivity of the soft-burnt material provides for a rapid dissolution of the dolomite grain in the slag.

Top-blown oxygen converters
<ul style="list-style-type: none"> Limit the refractory wear in the slag zone thus extending markedly the furnace campaigns Sets an optimal slag consistency for Slag Splashing thus extending the service life of entire converter vessel
Arc furnaces
<ul style="list-style-type: none"> Limits the refractory wear in the slag zone thus increasing the number of furnace campaigns Adjusts the viscosity for optimum slag foaming
Steel casting ladle
<ul style="list-style-type: none"> Limits the refractory wear in the slag zone thus markedly increasing the ladle life Adjusts the viscosity for an optimum sequence of the metal-slag reactions Improves the marginal conditions for separation of non-metal inclusions



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8. Storage

The product must be protected against weather influences and stored in tight containers. Otherwise there would be the risk of hydration and re-carbonization.

9. Safety advice

It causes irritations and burns. Wear goggles and protective clothing.
In case of eye contact, rinse with water for several minutes and consult a doctor.
Keep away from children.

10. Quality assurance

- Product specification and development in cooperation with Technische Universität - Bergakademie Freiberg
- Self-monitoring at in-house lab
- External monitoring by Materialforschungs- und Prüfanstalt University of Weimar
- The substance "Burnt Dolomite" with the chemical name "Calcium Magnesium Oxide" (CaOMgO) was registered on September 27, 2010 with the number 01-2119474202-47-0005 in accordance with the REACH Regulation 1907/2006/EC