

SCANGRIT

TECHNICAL DATA SHEET

Product: Iron Silicate

Description An inert synthetic mineral blasting abrasive manufactured by granulation in water of the slag arising from unique fumed copper smelting processes. It is essentially an iron silicate with trace metals bound in an amorphous glass in the form of complex silicates and oxides and contains no free silica. The iron is present as iron silicate in amorphous glass ($\text{Si}(\text{Fe,Al,Ca})\text{O}_{2-3}$, fayalite Fe_2SiO_4) with accessory magnetite (Fe_3O_4).

Uses As a non-metallic blasting abrasive.

Physical Properties:

| | | |
|--|---------------------------|---------------|
| Apparent density (kg/m^3) | 3.4–3.7 x 10 ³ | [ISO 11125-3] |
| Bulk density (kg/m^3) | 1700 | |
| Mohs hardness | 7 | [ISO 11127-4] |
| Initial particle shape | Grit | [ISO 11126-1] |
| Moisture (%) | max. 0.2 | [ISO 11126-5] |
| Water soluble chloride content (mg/kg) | max. 25 | [ISO 11127-7] |
| Conductivity of aqueous extract ($\mu\text{S/cm}$) | max. 250 | [ISO 11127-6] |

Chemical Properties

Typical Chemical Analysis

| | | | | | |
|--------------|-------------------------|-------------|--------------|-------------------------|-----------|
| Silica as | SiO_2 | 32-36 % | Aluminium as | Al_2O_3 | 3-7 % |
| Iron as | Fe_2O_3 | 51-58 % | Titanium as | TiO_2 | 1 % |
| Magnesium as | MgO | 1-2 % | Calcium as | CaO | 1-4 % |
| Zn as | Zn | 1-2 % | Cu as | Cu | 0.5-0.9 % |
| Pb as | Pb | 0.01-0.2 %* | Free silica | | <0.5 % |

*Lead content of Grade 2, 3 and 4 is typically less than 0.04 %

Grades

| Grade | size range (mm) | Surface profile achieved on mild steel (ISO 8503) |
|-------|-----------------|---|
| 2 | 0.2 - 0.85 | Fine |
| 3 | 0.2 - 1.70 | Medium |
| 4 | 0.5 - 2.00 | Coarse |
| 5 | 0.2 - 2.5 | Coarse |
| 6 | 0.5 - 2.5 | Coarse |

Industry Standards

Complies with BS EN ISO 11126 Part 3 - Preparation of Steel Substrates before application of paints and related products – Specifications for non-metallic abrasives Part 3 Copper Slag.

Packing

25 kg bags palletised and shrink-wrapped.

Further Information.

Specific enquiries relating to the application and use of iron silicate may be directed to

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