

### Features & Benefits

**SILVERBOND® M** silica flours are produced by iron-free grinding and accurate sieving by use of air-separators. A selected silica sand with a SiO<sub>2</sub> content of over 99 % is used as raw material. The purity, controlled particle size distribution, chemical inertness, optical properties and hardness make **SILVERBOND® M** the performance standard for filler applications.

### Granulometric Data & Physical Characteristics

Mean values. These do not represent a specification.

|                    |                     | M6        | M10       | M300      | M400      | Method            |
|--------------------|---------------------|-----------|-----------|-----------|-----------|-------------------|
| CLP Classification |                     | STOT RE 2 | STOT RE 1 | STOT RE 1 | STOT RE 1 |                   |
| + 63 µm            | %                   | 14        | 2         |           |           | ISO 933-10        |
| + 40 µm            | %                   |           |           | 2         | 0.2       | ISO 933-10        |
| D <sub>10</sub>    | µm                  | 5         | 4         | 4         | 3.5       | Laser diffraction |
| D <sub>50</sub>    | µm                  | 33        | 23        | 19        | 12        |                   |
| D <sub>90</sub>    | µm                  | 99        | 63        | 44        | 27        |                   |
| SSA                | m <sup>2</sup> / mg | 0.8       | 1         | 1.2       | 1.9       | BET               |
|                    | m <sup>2</sup> / mg | 0.32      | 0.37      | 0.41      | 0.66      | ASTM C204         |
| Colour             | L*                  | 91        | 92        | 93        | 94        | Spectrophotometer |
|                    | a*                  | 0.5       | 0.5       | 0.5       | 0.4       |                   |
|                    | b*                  | 2.7       | 2.5       | 2.2       | 2         |                   |
| Oil absorption     | g/100 g             | 22        | 22        | 26        | 28        | ISO 787/9         |
| pH                 | -                   | 7         | 7         | 7         | 7         |                   |
| Density            | g/cm <sup>3</sup>   | 2.65      | 2.65      | 2.65      | 2.65      | He-pyknometer     |
| Bulk density       | g/cm <sup>3</sup>   | 0.8       | 0.8       | 0.85      | 0.53      | Scott Volumeter   |
| Hardness           | Mohs                | 7         | 7         | 7         | 7         |                   |
| Refractive index   |                     | 1.55      | 1.55      | 1.55      | 1.55      |                   |

|                    |                     | M500      | M600      | M800      | Method            |
|--------------------|---------------------|-----------|-----------|-----------|-------------------|
| CLP Classification |                     | STOT RE 1 | STOT RE 1 | STOT RE 1 |                   |
| + 40 µm            | %                   | 0.004     | 0.004     | 0.001     | ISO 933-10        |
| D <sub>10</sub>    | µm                  | 2.2       | 2.6       | 0.4       | Laser diffraction |
| D <sub>50</sub>    | µm                  | 5         | 5         | 1.8       |                   |
| D <sub>90</sub>    | µm                  | 11.7      | 11.3      | 4.2       |                   |
| SSA                | m <sup>2</sup> / mg | 3.73      |           | 7.04      | BET               |
|                    | m <sup>2</sup> / mg | 1.2       | 1.2       | 1.5       | ASTM C204         |
| Colour             | L*                  | 95        | 95        | 96.6      | Spectrophotometer |
|                    | a*                  | 0.2       | 0.2       | 0.3       |                   |
|                    | b*                  | 2         | 2         | 2         |                   |
| Oil absorption     | g/100 g             | 23        | 24        | ?         | ISO 787/9         |
| pH                 | -                   | 7         | 7         | 7         |                   |
| Density            | g/cm <sup>3</sup>   | 2.65      | 2.65      | 2.65      | He-pyknometer     |
| Bulk density       | g/cm <sup>3</sup>   | 0.42      | 0.4       | 0.34      | Scott Volumeter   |
| Hardness           | Mohs                | 7         | 7         | 7         |                   |
| Refractive index   |                     | 1.55      | 1.55      | 1.55      |                   |

## Chemical Analysis

Mean values. These do not represent a specification.

|                                |      | Weight-% |      |      |      |      |       | Method          |
|--------------------------------|------|----------|------|------|------|------|-------|-----------------|
|                                | M6   | M10      | M300 | M400 | M500 | M600 | M800  |                 |
| SiO <sub>2</sub>               | 99.5 | 99.5     | 99.5 | 99.5 | 99.2 | 99.2 | 98.5  | XRF             |
| Fe <sub>2</sub> O <sub>3</sub> | 0.03 | 0.03     | 0.01 | 0.03 | 0.05 | 0.05 | 0.015 | XRF             |
| Al <sub>2</sub> O <sub>3</sub> | 0.2  | 0.2      | 0.2  | 0.2  | 0.4  | 0.4  | 0.9   | XRF             |
| TiO <sub>2</sub>               | 0.03 | 0.03     | 0.03 | 0.03 | 0.03 | 0.03 | 0.2   | XRF             |
| K <sub>2</sub> O               | 0.05 | 0.05     | 0.05 | 0.05 | 0.05 | 0.05 | 0.05  | XRF             |
| CaO                            | 0.02 | 0.02     | 0.02 | 0.02 | 0.02 | 0.02 | 0.03  | XRF             |
| L.O.I.                         | 0.15 | 0.12     | 0.12 | 0.15 | 0.3  | 0.3  | 0.3   | 1100 °C, 1 hour |

## For Product Information, Availability & Customer Service

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