



MOLOCHITE™

Molochite is the calcined kaolin for the investment casting, the kiln furniture and general refractories industries. It is a quartz free, cristobalite free and nodular iron free material.

| CHEMICAL ANALYSIS (%) | TYPICAL VALUE | SPECIFICATIONS | |
|--------------------------------|---------------|----------------|------|
| | | MIN | MAX |
| Al ₂ O ₃ | 42.0 | 40.5 | 43.5 |
| K ₂ O | 2.0 | 1.8 | 2.2 |
| SiO ₂ | 54.0 | | |
| TiO ₂ | 0.07 | | |
| CaO | 0.07 | | |
| MgO | 0.30 | | |
| Fe ₂ O ₃ | 1.30 | | |

| PHYSICAL PROPERTIES | | |
|---------------------|-------|--|
| Specific gravity | 2.70 | |
| Porosity (vol %) | 10 | |
| Hardness (Mohs) | 7 - 8 | |

| MINERALOGICAL COMPOSITION BY X-RAY DIFFRACTION | |
|--|----|
| Mullite (mass %) | 55 |
| Amorphous material (mass %) | 45 |

| REFRACTORINESS (° C) | |
|----------------------|-------------|
| Initial deformation | 1750 - 1770 |
| Squatting | > 1770 |

| THERMAL EXPANSION | |
|---|------------------------|
| Coefficient of expansion, 20-1000°C [°C ⁻¹] | 4.4 x 10 ⁻⁶ |

| MAGNETICS [ppm] | |
|---------------------|-----|
| Coarse grades | 160 |
| Intermediate grades | 250 |
| Milled grades | 120 |
| GL Grades | 50 |

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MOLOCHITE™

RANGE

| PRODUCTS | | COARSE GRADES | | | | | | INTERMEDIATE GRADES | | | | | | MILLED GRADES | | |
|----------------------------|-------------|-----------------|-----------------|------------------|----------------|----------------|------------------|---------------------|--------------|-----------------|--------------|-----------------|--------------|---------------|-------------------|---------------|
| | | 1/4 - 8 | 8 - 16 | - 8 | 16 - 30 | 16 -30 DD | 18 - 36 DD | 22 - 60 DD | - 22 | 30 - 80 DD | - 30 | 50 - 80 DD | - 80 | - 120 | - 200/- 200 GL | - 325 |
| METRIC EQUIVALENT mm | BBS MESH | 2,00 to 6,70 | 1,00 to 2,00 | 0 to 2,00 | 0,5 to 1,00 | 0,5 to 1,00 | 0,425 to 0,85 | 0,25 to 0,71 | 0 to 0,71 | 0,18 to 0,50 | 0 to 0,50 | 0,18 to 0,30 | 0 to 0,18 | 0 to 0,125 | 0 to 0,075 | 0 to 0,053 |
| 9,5 | - | | | | | | | | | | | | | | | |
| 6,70 | 1/4 | 100 99,75 | 100 | | | | | | | | | | | | | |
| 4,75 | 3 1/2 | | | | | | | | | | | | | | | |
| 4,00 | 4 | 96 52 | 76 | | | | | | | | | | | | | |
| 2,80 | 6 | | 100 99,75 | 100 99,75 | 100 | | | | | | | | | | | |
| 2,00 | 8 | 16 0 10 | 5 | 100 98 100 | 99 | 98 | | | | | | | | | | |
| 1,70 | 10 | 0 0 | 2 | 100 80 | 91 | | | | | | | | | | | |
| 1,18 | 14 | | | 100 99 | 100 | 100 99 | 100 | | | | | | | | | |
| 1,00 | 16 | 3 0 | 0 | 15 0 | 94 51 | 76 | 100 80 | 87 | 100 80 | 88 | 100 99,75 | 100 99,75 | 100 | | | |
| 0,85 | 18 | | | | | | | | | | | | | | | |
| 0,71 | 22 | | 2 0 | 0 | 64 20 | 41 | 55 20 | 41 | 100 31 | 68 | 100 98 | 100 86 | 91 | 100 99,75 | 100 99 | |
| 0,50 | 30 | | | 61 14 | 31 | 22 0 | 15 0 | 5 | 14 0 | 5 | 56 55 | 52 76 | 76 | 65 94 | 99 | 100 95 |
| 0,355 | 44 | | | | | | | | | | | | | | | |
| 0,300 | 52 | | | | | | | | | | | | | | | |
| 0,250 | 60 | | | 40 3 | 15 | 2 0 | 1 0 | 0 | 0,25 0 | 0 | 13 0 | 60 17 | 3 | 25 0 | 71 35 | 48 70 |
| 0,180 | 85 | | | | | | | | | | | | | | | |
| 0,150 | 100 | | | 29 0 | 8 | 0,25 0 | 0,25 0 | | | | | | | | | |
| 0,125 | 120 | | | | | | | | | | | | | | | |
| 0,075 | 200 | | | 17 0 | 2 | | | | | | | | | | | |
| 0,053 | 300 | | | | | | | | | | | | | | | |
| 0,020 | | | | | | | | | | | | | | | | |
| 0,010 | | | | | | | | | | | | | | | | |
| 0,002 | | | | | | | | | | | | | | | | |

Revision 1 - 2014 July

Maximum

| |
|----------|
| X |
| X |

 Wherenomaximumandminimumvaluesare shown, then Mean Value is indicative only.

Minimum

| |
|---|
| X |
|---|