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VANDERBILT

Technical Data

VANSIL[®] HR-2000 Acicular Wollastonite

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VANSIL[®] HR-2000 Acicular Wollastonite

Rubber and Plastics Department

VANSIL HR-2000 is a high aspect ratio, intermediate length needle grade for thermoplastic and thermoset compounds. It is used as the sole reinforcement, as part of a binary reinforcement system, or to complement chopped glass fiber in providing strength, impact resistance and dimensional stability.

Typical properties:

| | |
|---|------|
| Average aspect ratio | 14:1 |
| Average needle length, μm | 75 |
| 200 mesh retention, % | 6 |
| Surface Area N_2 B.E.T., m^2/g | 1.0 |
| Bulk density, loose, lbs./ft^3 | 24 |
| Bulk density, tapped, lbs./ft^3 | 42 |
| Brightness, G.E. | 88 |
| Density, g/cm^3 | 2.9 |

Typical chemical analysis (calculated as oxides):

| | |
|--|-------|
| Calcium oxide (CaO) | 44.0% |
| Silicon dioxide (SiO_2) (by difference) | 50.0% |
| Aluminum oxide (Al_2O_3) | 1.8% |
| Magnesium oxide (MgO) | 1.5% |
| Iron oxide (Fe_2O_3) | 0.3% |
| Sodium oxide (Na_2O) | 0.2% |
| Manganese oxide (MnO) | <0.1% |
| Ignition loss (1000°C) | 2.2% |

Particle size distribution - SediGraph 5100:

| | <u>% Finer than Indicated Size</u> |
|------------------|------------------------------------|
| | VANSIL HR-2000 |
| 40 μm | 90 |
| 20 μm | 65 |
| 15 μm | 51 |
| 10 μm | 35 |
| 5 μm | 17 |
| 2 μm | 5 |
| 1 μm | 2 |
| Median | 14.5 μm |

Note: Surface treatments are available on request.

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