

## TSR9500

### Description

TSR9500 are spherical silicone beads with narrow particle size distributions and a mean particle diameter of approximately 5 microns. The low refractive index and uniform particle size are especially beneficial for light diffusion applications when the beads are added to polymer systems such as polycarbonates, polystyrene and acrylics. The high thermal stability of the silicone beads allows for high temperature processing including extrusion and injection molding.

### Key Features and Typical Benefits

- Low refractive index gives optimal light diffusion properties at low dosage levels when the beads are formulated with acrylic, polystyrene and polycarbonate resins
- Spherical geometry results in provides for uniform particle distribution in organic binders and polymers
- High heat stability allows TSR 9500 to be processed with plastics using typical polymer processing equipment, i.e., extruders, injection molders
- Improvement in wear resistance and modification of slip properties of polymer surfaces

### Typical Physical Properties

| Properties                        |                   |                       |
|-----------------------------------|-------------------|-----------------------|
| Appearance                        |                   | White spherical beads |
| Average Particle Size             | µm                | 5.0                   |
| Weight loss at 250 °C for 30min   | %                 | 0.4                   |
| pH                                |                   | 7.0                   |
| Particle Specific Gravity (25 °C) | g/cm <sup>3</sup> | 1.32                  |
| Bulk Gravity                      | g/ml              | 0.35                  |

|                  |      |
|------------------|------|
| Refractive Index | 1.42 |
|------------------|------|

Typical properties are average data and are not to be used as or to develop specifications.

### Heat Stability

The following table shows the percentage of weight loss for TSR9500 after heating to 350 and 900 °C, respectively.

| Heat Stability          |         |
|-------------------------|---------|
| Weight Loss % at 350 °C | 2 - 3   |
| Weight Loss % at 900 °C | 10 - 12 |

Note: Rate of temperature increase = 5 °C/min

### Patent Status

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### Limitations

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