Sphere Scientific Corporation

UniMF Microsphere

Description

Microsphere Composition:	Melamine-Formaldehyde Resin
Form :	Aqueous dispersion or Dry powder
Approximate Concentration (W/V):	5% or 10% solids
Sodium Azide Concentration :	50 ppm
Surfactant (W/V):	<0.1% or None

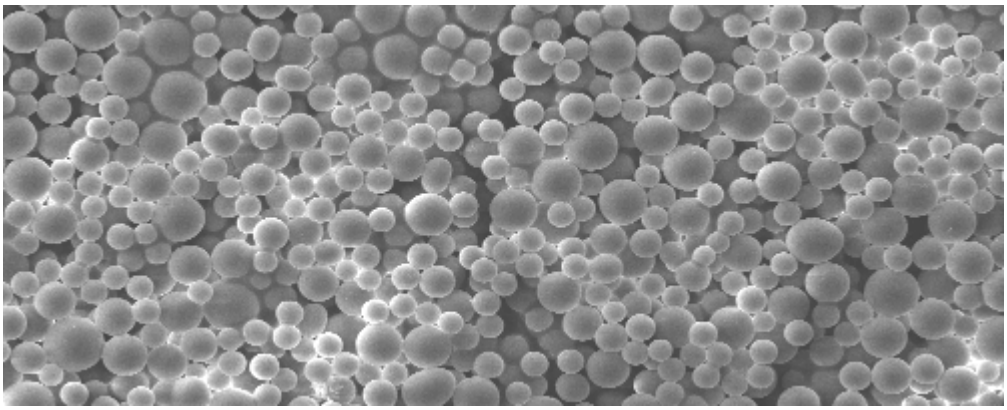
Physical Data

Nominal Mean Diameter (μm) :	6, 8, 13, 50
Density（g/cm^3）:	1.51
Refractive Index:	1.68 (589nm, 25℃)

Physical and Chemical Properties

Hydrophilic surface, possess many functional groups on the surface (methylol groups, amino groups), which can be used for a covalent attachment of other ligands; High cross linking density, High temperature stability up to 300℃; Superior mechanical strength; Stable in acids and bases; Extremely high stability in organic solvents, no swelling or shrinking upon contact with organic solvents; Soluble in organic solvents like benzene, halogenated hydrocarbons, or acetone; Reduced non-specific protein binding activity.

Example of SEM picture



Storage and Handling

Aqueous dispersions of melamine resin particles have excellent stability. Storage at room temperature is possible without bacterial growth. Particles can be washed with alcohol, air dried and autoclaved. Dried particles can be redispersed in water without any agglomeration. Dispersions of MF particles can be frozen.

Application

1. MF particles find wide applications as model systems in medicine, biochemistry, colloid chemistry, and aerosol research.
2. This particles can be used as standards (e.g. in flow cytometry, confocal laser scanning microscopy, light scattering instruments) as well as tracers in environmental science, flow measurements in gases and liquids like Laser Doppler Anemometry (LDA), Particle Dynamics Analysis (PDA), Particle Image Velocimetry (PIV), Digital Imaging Velocimetry (DIV) and Laser Speckle Velocimetry (LSV).