

Utah Specification Beads MC-50

High performance glass beads for improved retro-reflectivity and durability for high performance pavement markings.

GRADATION

<u>U.S. Mesh</u>	<u>Microns</u>	<u>% Retained</u>	<u>% Passing</u>
18	1000	20 - 35	65-80
30	600	50 - 70	30-50
50	300	95 - 100	0-5

Roundness A minimum of 80 % true spheres above the 30 sieve by visual inspection. All beads below the 30 sieve, must meet a minimum of 80% true spheres by ASTM Method D 1155.

Color / Clarity Beads shall be colorless / clear and free of carbon residues.

Refractive Index Minimum 1.51 by oil immersion method.

Air Inclusions < 5% by visual count.

Hardness All beads above the 30 sieve shall exhibit an average hardness of C70.5 when measured using the Rockwell C scale method and with a minimum sampling of 100 glass beads.

Crushing Strength Beads above the 30 sieve shall exhibit an average crushing strength of not less than 60,000 psi when measured with the L/D^2 method and with a minimum sampling of 100 glass beads.

Coatings Dual Coating for optimum adhesion and embedment.

Chemical Resistance to hydrochloric acid, water, calcium chloride, and sodium sulfide as tested per methods outlined in sections 4.3.6 to 4.3.9 of the TT-B Federal Spec.1325C.

A minimum of 50% of the total weight shall be manufactured using a molten kiln direct melt method.

All post consumer glass beads shall be manufactured from North American glass waste streams. The bead manufacturer shall submit a notarized certification to the department stating that North American glass waste streams were used in the manufacture of this specification.