

Polyurethane Beads for Cosmetics

▶ Application

Raw materials for cosmetics, such as powder foundation and antiperspirant

▶ Characteristics

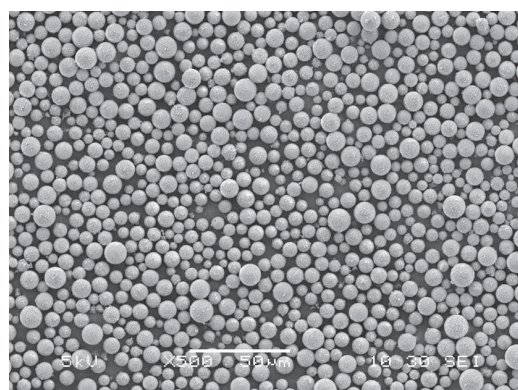
- Non-yellowing spherical cross-linked polyurethane beads
- Functional materials, capable of controlling polyurethane resin composition and particle size (from several μm to several tens of μm) with our original synthesis technology
- Capable of controlling shore hardness (between A50 and A100 according to JIS) because of the molecular design offering flexibility and elasticity
- Excellent in mechanical strength/rubber elasticity/flex-resistance/cold-resistance/abrasion-resistance/oil-resistance because of cross-linked polyurethane particles; also excellent in heat-resistance/light-fastness because of non-yellowing polyurethane
- Expected effects as cosmetic application :
 - (1) Pliability (i.e. soft touch feeling similar to human skin)
 - (2) Wrinkles / pores concealing effect, excellent rollability of beads on skin (i.e. spreadability and slipperiness)
 - (3) Skin transparency (refractive index = 1.49), soft matte finish (i.e. natural look)
 - (4) Excellent absorptivity of sebum (i.e. oleic acid)

▶ Representative Products

Produce name item	Average particle size (μm)	Circularity	True specific gravity (g/cm^3)	Bulk specific gravity (g/ml)	Non-volatile component (%)	Melting point ($^{\circ}\text{C}$)	Degree of hardness (JIS-A)	Dynamic friction coefficient (μ)
CM-1077	7	0.96	1.15	0.40	99 \leq	250 \leq	74	0.50 \leq
CM-1157	15	0.96	1.15	0.48	99 \leq	250 \leq	74	0.36
Measuring method	Laser diffraction	Particle shape analysis	JIS K7112	JIS K6720	Infrared moisture meter	Thermomechanical analysis	JIS K7215	Surface friction testing equipment

▶ Evaluation Results

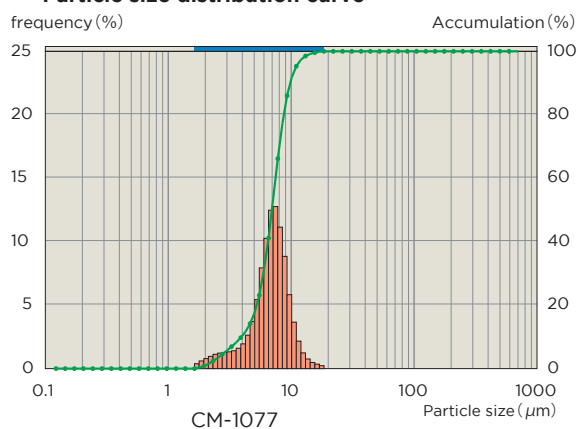
Electron micrograph



CM-1077

50 μm

Particle size distribution curve



* Above is our internal experimental data. It is not guaranteed.

