TECHNICAL BULLETIN

PRODUCT: POLYSET 645

POLYSET 645 is a unique functionality thermoset polyester resin. It possesses both acrylate and methacrylate functional groups that are designed to cure via free radical cure. As full cure is achieved, POLYSET 645 exhibits excellent low shrinkage properties. Coatings based on POLYSET 645 exhibit toughness and abrasion resistance. POLYSET 645 can be cured with or without catalyst. Optimum uncatalyzed cure takes place at 200°C or above. Depending on the end-users formulation, and choice of catalyst or coreactants, cure rates will vary. A typical uncatalyzed cure schedule may be 15-30 minutes at 200°C.

POLYSET 645 is recommended for abrasion-resistant protective coatings. It is also recommended for decorative, marine and many heat-resistant applications where thermal expansion issues are key determinants in performance.

PHYSICAL PROPERTIES:

Density (g/cm³)	1.2500 ± 0.0025
Color	Clear, amber
Tg	160° ± 5° C
Coefficient of Thermal Expansion	α_1 = 50 ± 2
Shrinkage (TGA @ 300°C)	< 1.0%
Weight Solids	>99.9%
Viscosity (@ 40°C)	9000 ± 250 m·Pa

For further information, please direct your inquiries to:

Designer Molecules Inc.
10090 Willow Creek Road
San Diego, CA 92131

Contact: Sharon Hanson
Phone: (858) 536-4703
Fax: (858) 348-1123
E-mail: shanson@designermoleculesinc.com
Web page: www.designermoleculesinc.com