



# Technical Data Sheet

## Freeman 945 Economical Hi-Temp Epoxy Surface Coat

### Description

Freeman 945 High Temperature Surface Coat is a thixotropic, aluminum filled, heat resistant product that provides excellent duplication and sag-resistant properties. Freeman 945 is suited for continual use at temperatures ranging from 77°F (25°C) to 300°F (149°C). Freeman 945 Hi-Temp Surface Coat, when used in conjunction with Freeman 917 Hi-Temp Laminating Resin, is ideal for construction of vacuum-form molds, blow molds, holding, nesting, and bonding fixtures that are typically subjected to high temperatures.

### Physical Properties

Color (when mixed)	Gray
Mix Ratio (R:H by wt.)	100:10
Viscosity (mixed)	Thixotropic
Viscosity (resin only)	Sag test only
Viscosity (cps, hardener only)	140-200
Gel Time (min. @ 72°F)	45-55
Tack Time (hrs @ 72°F)	2.5 to 3
Mixed Sag (pass:fail)	1/16":1/8"
Demold Time (hrs)	24
Hardness (Shore D)(ASTM 2240)	90
Specific Gravity, mixed (ASTM D-792)	1.40
Volumetric Yield (cu. in./lb.)	19.90
Compressive Strength (psi)	25,000
Tensile Strength (psi)(ASTM D-638)	5,000
Flexural Strength (psi)	8,000
Deflection Temperature (°F)	310
CTE (in./in./°F)	.000037

**Post Curing Schedule:** After curing at room temperature for 24-48 hours, it is recommended to post cure 2 hours @ 150°F (66°C), plus 2 hours @ 200°F (93°C), plus 2 hours @ 250°F (121°C), plus 2 hours @ 300°F (249°C). Temperature limitations of the mold or model dictate whether it can be used as the supporting structure during the post cure cycle. If the tool must be pulled from the model for the post cure. A supporting frame must be provided. Uniform heat distribution is also required during post cure cycle; concentrated heat, such as that directed from a lamp, can cause warping. An elevated temperature cure will slightly increase the shrinkage compared to a room temperature cure.

### Ordering Information

SKU	Description	Size	Net wt.
055966	Freeman 945 Hi-Temp Surface Coat Resin Only	5 gallon	45 lbs
055967	Freeman 945 Hi-Temp Surface Coat Hardener Only	1 gallon	4.5 lbs

The user shall determine the suitability of this product for their application and assumes all risks and liabilities associated with the use of this product. The exclusive remedy for all proven claims is replacement of our materials only and in no event shall Freeman Mfg. & Supply Co. be liable for special, incidental, or consequential claims.

