



# 105 Epoxy Resin® / 209 Extra Slow Hardener®

## Technical Data Sheet

### 105 System 105/209

#### General Description

105/209 Epoxy is used for general coating and bonding applications in extremely warm and/or humid conditions or when extended working time is desired at room temperature. Provides approximately twice the working time of 206 Slow Hardener.

105/209 forms a high-strength, moisture-resistant solid with excellent bonding and barrier coating properties. It will wet out and bond to wood fiber, fiberglass, reinforcing fabrics, foam and other composite materials, and a variety of metals.

105/209 Epoxy can be thickened with WEST SYSTEM fillers to bridge gaps and fill voids and can be sanded and shaped when cured. With roller applications, it has excellent thin-film characteristics, allowing it to flow out and self-level without “fish-eyeing.” Multiple coats of 105/209 Epoxy creates a superior moisture barrier and a tough, stable base for paints and varnishes. It is formulated without volatile solvents resulting in a very low VOC content. It has a relatively high flash point, no strong solvent odor and does not shrink after curing. It is not intended for clear coating natural finished wood.

#### Handling Characteristics

Mix ratio by volume (300 Mini Pump ratio)	3 parts resin : 1 part hardener
by weight	3.68 : 1
Acceptable ratio range by weight	3.30 : 1 to 4.03 : 1
Mix viscosity (at 72°F) ASTM D-2393	650 cps
Pot life (100g at 72°F)	40-50 minutes
Working time, thin film*	3 to 4 hours
Cure to a solid, thin film*	20 to 24 hours
Cure to maximum strength	4 to 9 days
Minimum recommended temperature	70°F (21°C)

*\*Epoxy cures faster at higher temperatures and in thicker applications.*

#### Physical Properties of Cured Epoxy

Specific gravity	1.16
Hardness (Shore D) ASTM D-2240	82
Compression yield ASTM D-695	12,000 psi
Tensile strength ASTM D-638	7,300 psi
Tensile elongation ASTM D-638	3.6%
Tensile modulus ASTM D-638	3.98E+05 psi
Flexural strength ASTM D-790	12,500 psi
Flexural modulus ASTM D-790	3.97E+05
Heat deflection temperature ASTM D-648	117°F
Onset of Tg by DSC	122°F
Ultimate Tg	130°F
Annular shear fatigue @ 100,000 cycles	9,900 lb
VOC Content EPA Method 24/ASTM 2369-93	19.3 g/L or 0.16 lb./gal.
Volume percent solids	96.9% ± 3%

#### Storage/Shelf Life

Store at room temperature. Keep containers closed to prevent contamination. With proper storage, resin and hardeners should remain usable for many years. After a long storage, verify the metering accuracy of the pumps. Mix a small test batch to assure proper curing.

Over time, 105 Resin will thicken slightly and will therefore require extra care when mixing. Repeated freeze/thaw cycles during storage may cause crystallization of 105 Resin. Warm resin to 125°F and stir to dissolve crystals.

Hardener may darken with age, but physical properties are not affected by color. Be aware of a possible color shift if very old and new hardener are used on the same project.

Gougeon Brothers, Inc.  
P.O. Box 908  
Bay City, MI 48707

866-937-8797

westsystem.com

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