

# 105 Epoxy Resin® / 207 Special Coating Hardener®

## Technical Data Sheet

### 105 System 105/207

#### General Description

105/207 Epoxy is used for coating and fibreglass cloth application where exceptionally clarity of wood grain, moisture-resistant, natural wood finish is desired. 105/207 Epoxy is more blush resistant and less likely to turn cloudy in humid conditions. Thin film applications roll out and tip off smoothly, requiring less sanding in preparation for finish coatings. Three coats or more can be applied in one day without additional surface preparation. Fewer coats are required to fill fibreglass weave and in most cases the final coating can be sanded the following day.

105/207 Epoxy forms a high-strength, moisture-resistant solid with excellent bonding and barrier coating properties as well as being a structural adhesive for gluing and laminating. It has excellent compatibility with paints and varnishes. An ultraviolet inhibitor in 207 helps provide a beautiful, long lasting finish when used with a high quality UV-filtering varnish. It is formulated without volatile solvents resulting in a very low VOC content. It has a relatively high flash point, no strong solvent odour and does not shrink after curing.

#### Handling Characteristics

Mix ratio by volume.....	3 parts resin : 1 part hardener
by weight .....	3.5 : 1
Mix viscosity (at 25°C) Brookfield .....	775 mPas
Resin Density.....	1.16 gcm <sup>-3</sup>
Hardener Density.....	1.01 gcm <sup>-3</sup>
Pot life (100g at 25°C) .....	20 to 30 minutes
Working time, thin film* .....	85 to 110 minutes
Cure to a solid, thin film* .....	9 to 12 hours
Cure to working strength .....	5 to 7 days
Minimum recommended temperature .....	16°C

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

#### Physical Properties of Cured Epoxy

Specific gravity .....	1.10
Hardness 1 day (Shore D) BS EN ISO 868 .....	78
Hardness 14 days (Shore D) BS EN ISO 868 .....	82
Compression yield 1 day BS EN ISO 604 .....	41.46 MPa
Compression yield 14 days BS EN ISO 604 .....	74.72 MPa
Tensile strength BS EN ISO 527-2 .....	51.77 MPa
Tensile elongation BS EN ISO 527-2 .....	3.4%
Tensile modulus BS EN ISO 527-2 .....	2.82 GPa
Flexural strength BS EN ISO 178 .....	89.73 MPa
Flexural modulus BS EN ISO 178 .....	3.54 GPa
Heat deflection temperature ASTM D-648 .....	48°C
Onset of Tg by DSC .....	51°C
Ultimate Tg by DSC .....	58°C
Izod Impact ASTM D-256 .....	67.82 J/m
Annular shear fatigue @ 100,000 cycles .....	4354 kg

#### Storage/Shelf Life

Store at room temperature (above 10°C). Keep containers closed to prevent contamination. With proper storage, resin and hardeners should remain usable for the duration of the specified shelf-life. 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 crystallisation of 105 Resin. Warm resin to 50°C and stir to dissolve crystals. Hardener may darken with age, but physical properties are not affected by colour. Be aware of a possible colour shift if very old and new hardener are used on the same project.

These are typical properties and cannot be construed as a specification. The end users should test the products to ensure the products are suitable for the intended application. Any information, data, advice or recommendation published by Wessex Resins by other means and whether relating to Wessex Resins' materials or other materials, is given in good faith and believed to be reliable.

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