

## 105 Epoxy Resin® / 206 Slow Hardener®

### General Description

105/206 Epoxy is used for general coating and bonding applications when extended working and cure time are needed or to provide adequate working time at higher temperatures.

105/206 Epoxy forms a high-strength, moisture-resistant solid with excellent bonding and barrier coating properties. It will wet out and bond to wood fibre, fibreglass, reinforcing fabrics, foam and other composite materials, plus a variety of metals.

105/206 Epoxy can be thickened with WEST SYSTEM fillers to bridge gaps and fill voids. Once cured it can be sanded and shaped. With roller applications, it has excellent thin-film characteristics, allowing it to flow out and self-level without "fish-eyeing." Multiple coats of 105/206 Epoxy create 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 odour and does not shrink after curing. It is not intended for clear coating natural finished wood.

### Handling Characteristics

Mix ratio by volume .....	5 parts resin : 1 part hardener
by weight .....	5 : 1
Mix viscosity (at 25°C) Brookfield .....	725 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* .....	90 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 .....	1.11
Hardness 1 day (Shore D) BS EN ISO 868 .....	80
Hardness 14 days (Shore D) BS EN ISO 868 .....	83
Compression yield 1 day BS EN ISO 604 .....	55.08 MPa
Compression yield 14 days BS EN ISO 604 .....	79.28 MPa
Tensile strength BS EN ISO 527-2 .....	50.46 MPa
Tensile elongation BS EN ISO 527-2 .....	4.5%
Tensile modulus BS EN ISO 527-2 .....	3.17 GPa
Flexural strength BS EN ISO 178 .....	81.42 MPa
Flexural modulus BS EN ISO 178.....	3.10 GPa
Heat deflection temperature ASTM D-648 .....	51°C
Onset of Tg by DSC .....	52°C
Ultimate Tg by DSC .....	59°C
Izod Impact ASTM D-256 .....	28.84 J/m
Annular shear fatigue @ 100,000 cycles .....	4581 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.

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