

105 Epoxy Resin® / 205 Fast Hardener®

General Description

105/205 Epoxy is used for general coating and bonding applications at lower temperatures and to produce a rapid cure that develops its physical properties quickly at room temperature.

105/205 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.

105/205 Epoxy can be thickened with WEST SYSTEM fillers to bridge gaps and fill voids. Once cured it can be sanded and shaped. With roller application, it has excellent thin-film characteristics, allowing it to flow out and self-level without "fish-eyeing." Multiple coats of 105/205 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 (300 Mini Pump ratio)	5 parts resin : 1 part hardener
by weight	5 : 1
Mix viscosity (at 25°C) Brookfield	975 mPas
Resin Density	1.16 gcm ⁻³
Hardener Density	1.05 gcm ⁻³
Pot life (100g at 25°C)	10 to 15 minutes
Working time, thin film*	60 to 70 minutes
Cure to a solid, thin film*	5 to 7 hours
Cure to working strength	5 to 7 days
Minimum recommended temperature	5°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	69.77 MPa
Compression yield 14 days BS EN ISO 604	78.72 MPa
Tensile strength BS EN ISO 527-2	54.09 MPa
Tensile elongation BS EN ISO 527-2	3.4%
Tensile modulus BS EN ISO 527-2	2.81 GPa
Flexural strength BS EN ISO 178	97.29 MPa
Flexural modulus BS EN ISO 178	3.18 GPa
Heat deflection temperature ASTM D-648	48°C
Onset of Tg by DSC	54°C
Ultimate Tg by DSC	61°C
Izod Impact ASTM D-256	49.66 J/m
Annular shear fatigue @ 100,000 cycles	4808 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 self-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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ISO9001:2008 Certified

REV 2 / Oct, 2022