5. PRODUCT SELECTION AND ESTIMATING GUIDES

Hardener Selection Guide

Select a hardener for its intended use and for the cure speed best suited for your job in the temperature range in which you are working

Hardener	Resin/Hardener Use	Hardener Temperature Range (°C) Room Temp 5° 10° 15° 20° 25° 30° 35°	Cure Speeds at room tempurature* Gel Time at (25°C) (60g mass)	Open Time at (20°C) (Thin film)	Cure to solid at (20°C) (Thin film)	Mini Pump Required
205	General bonding and coating		10-15 mins	60-70 mins	6-8 hours	301 A,B or C
206	General bonding and coating		20-25 min	90-110 mins	10-15 hours	301 A,B or C
207	Clear coating		18-23 mins	85-110 mins	10-15 hours	303 A,B or C
209	General bonding and coating		48-56 mins	200-260 mins	10-15 hours	303 A,B or C

*Note: Epoxy cures faster in warmer temperatures and in thicker applications. Epoxy cures slower in cooler temperatures and in thinner applications.

Filler Selection Guide

Uses **Applications - desired characteristics** Thickness of Resin/Hardener/Filler mixes.	Adhesive Fillers High density High strength ← → Lowest density Easiest sanding				Fairing Fillers	
	404	**406**	**403**	**405**	**407**	**410**
Bonding Hardware (Mayonnaise Consistency) - Increased fastener interface and hardware load capability - maximum strength	★★★★	★★★	★★★	★★		
General Bonding (Mayonnaise Consistency) - Join parts with epoxy thickened to create a structural gap filler - strength/gap filling	★★★	★★★	★★★	★★	★	
Bonding with Fillets (Peanut Butter Consistency) - Increase joint bonding area and create a structural brace between parts - smoothness/strength	★★	★★★★	★★	★★★	★★★	
Laminating (Ketchup Consistency) - bond layers of wood strips, veneers, planks, sheets and cores - gap filling strength	★★	★★★	★★★★	★★	★★	
Fairing (Peanut Butter Consistency) - Fill low areas and voids with an easily shaped and sanded surface filler/fairing compound - sandability/gap filling					★★★	★★★★

Filler suitability for various uses: ★★★★= excellent, ★★★= very good, ★★= good, ★= fair, (no stars) = not recommended.

Selecting Fillers

As a rule, use higher-density fillers when bonding higher-density materials such as hardwoods and metals. Any of the adhesive fillers are suitable for most bonding situations. The choice of a filler for general use may be based on the handling characteristics prefered. Fillers may also be blended to create mixtures

Filler Characteristics Guide

GENERAL CHARACTERISTICS	FILLER					
	403	404	405	406	407	410
Mixing (Easiest = 5)	5	2	4	3	2	4
Texture (Smoothest = 5)	1	2	3	5	4	4
Strength (Strongest = 5)	4	5	4	4	2	1
Weight (Lightest = 5)	3	1	3	3	4	5
Sanding (Easiest = 5)	2	1	2	2	4	5

Filler suitability for various uses: 5 = excellent, 4 = very good, 3 = good, 2 = fair, 1 = poor

Filler Estimation Guide

FILLER	GENERAL CHARACTERISTICS		
	KETCHUP	MAYONNAISE	PEANUT BUTTER
403 Microfibres	4%	7%	16%
404 High-Density Filler	35%	45%	60%
405 Filleting Blend	15%	20%	25%
406 Colloidal Silica	3%	5%	8%
407 Low-Density Filler	20%	30%	35-40%
410 Microlight	7%	13%	16%

The table above shows approximate percentages by weight of filler required to be added to mixed epoxy to product a 'Ketchup', 'Mayonnaise' or 'Peanut Butter' consistency for the various filler products.

Estimating coating coverage of Mixed WEST SYSTEM Epoxy

1.0 Kg of Mixed Epoxy	Saturation Coat over a Porous Surface at 25°C	Build-up Coat over a Non-Porous Surface at 25°C
105 Resin with 205 or 206 Hardener	6.5 - 7.5m^2	8.5 - 9.5m^2
105 Resin with 207 or 209 Hardener	7.0 - 8.0m^2	9.0 - 10.0m^2

Adding fillers or wetting out fabrics will decrease these coverages

The table gives the approximate quantity of mixed epoxy required to coat a 1m^2 area.

Please note the epoxy fairing mixes will provide an epoxy/filler thickness of approximately 3mm.

Epoxy Mix	Mixed Weight required to coat 1m^2 at room temperature
105 Resin with 205 or 206 Hardener	135g
105 Resin with 207 or 209 Hardener	125g
105 Resin with 205 Hardener and 40% by weight of 407 Low-Density	1.8kg = 3mm Thick Layer
105 Resin with 205 Hardener and 16% by weight of 410 Microlight	1.5kg = 3mm Thick Layer