

Overview of BIODUR® Polymers

Applications . Mixing Ratios . Processing times

Polymer	Application	Hardener	Additives	Mixing Ratios	Min. Processing Time	Suitable Order Quantities			Stability	Notes
SILIKONES										
S 10	Silicone standard method for macroscopic specimens, universal use	S 3 / S 6		1% (v/v) S 3 added to S 10	+20 °C (+70 °F): 3 weeks -25 °C (-15 °F): 3 months	S 10:	15 kg	50 kg	1 year	Impregnation at -20 °C (-4 °F) Storage of impregnation mixture at -70 °C (-94 °F)
						S 3:	0.15 L	0.5 L		
						S 6:	1-2 L	minimum 5.0 L		
S 15	Archeological wood, organs, organ packages	S 3 / S 6		1% (v/v) S 3 added to S 15	+20 °C (+70 °F): 6 months	S 15:	15 kg	50 kg	1 year	Impregnation at room temperature
						S 3:	0.15 L	0.5 L		
						S 6:	1-2 L	minimum 5.0 L		
S 49	Surface treatment (dyed or transparent; shiny)	S 3 / S 6	AS70 (Surface Preparation)	1% (v/v) S 3 added to S 49	+20 °C (+70 °F): 1 week	S 49:	0.5 kg		1 year	Prepare only quantities for one day. Apply before gas curing
						S 3:	0.15 L			
S 14 Red	Vessel injections (flexible)	S 1		1% - 10% (v/v) S 1 added to S 14 Red	20 min to several days	S 14:	1 kg		1 year	Adjust processing time by varying hardener dosage
						S 1:	0.1 L			
EPOXY RESINS										
E 12 (with E 1)	Transparent body slices for research and museums (Sandwich and flat chamber methods)	E 1	AE10 (AE30)	100/95 p.b.w. 1) E 12* 28/26 p.b.w. E 1* 5 p.b.w. AE30 20 p.b.w. AE10**	12 hours to 24 hour (depending on amount and temperature)	E 12:	5 kg	60 kg	E 12, E 1, AE10: 1 year AE30: 6 months (in a cold place!)	Warm crystallized E 12 to 50 °C - 70 °C (120 °F to 160 °F) prior to use. Add hardener only after cooling. * When using AE30, only 95 p.b.w. of E 12 are required, and only 26 p.b.w. of E 1. ** The E 12/E 1 impregnation mixture contains 20 p.b.w. of AE10. The mixture for filling the flat chamber, however, contains no AE10
						E1:	1.5 kg	18 kg		
						AE30:	0.25 kg	3 kg		
						AE10:	1 kg	12 kg		
E 12 (with E 6)	Transparent body slices for histological purposes	E 6	E 600	100 p.b.w. E 12 50 p.b.w. E 6 0.5% (v/v) E 600 (relative to total amount)	+20 °C (+70 °F): 5 days	E 12:	5 kg	10 kg	1 year	
						E 6:	2.5 kg	5 kg		
						E 600:	0.1 L	0.1 L		
E 12 (with E 7)	Ground sections	E 7	E 700 AE10	100 p.b.w. E 12 70 p.b.w. E 7 10 p.b.w. AE10 0.2% (v/v) E 700 (relative to total amount)	+20 °C (+70 °F): 1 week	E 12:	5 kg	10 kg	1 year	
						E 7:	4 kg	7 kg		
						E 700:	0.02 kg	0.04 kg		
						AE10:	1 kg	1 kg		
E 20	Vessel injections and corrosion specimens (firm)	E 2	MEK AE10	100 p.b.w. E 20 45 p.b.w. E 2	40 min to 4 hours (depending on amount of additive)	E 20:	1 kg	10 kg	1 year	Additives optional. Acetone resistant; methylene chloride resistant <24 h
						E 2:	0.45 kg	4.5 kg		
POLYESTER-COPOLYMERS										
P 35	Plastination of brain slices	A 9		2% (v/v) A 9 added to P 35	+20 °C (+70 °F): 1 week +5 °C (+40 °F): 2-3 months	P 35:	15 kg	90 kg	P 35: 1 year A 9: 6 months (in a cold place!)	Store the P 35/A 9 mixture and A 9 at +5 °C (+40 °F) in a dark place! Tightly close container.
						A 9:	0.3 L	1.8 L		
P 40	Plastination of brain slices	A 4		2% (v/v) A 4 added to P 40	< +5 °C (+40 °F): 2 weeks (stored in a dark place)	P 40:	15 kg	90 kg	P 40: 6 months at +5 °C (+40 °F) A 4: 6 months at +5 °C (+40 °F)	Always store P 40 and Hardener A 4 in a cool place. Cure P 40 with A 4 or solely with light.
						A 4:	0.3 L	1.8 L		
POLYMERIZING EMULSION (PEM)										
PEM 11	Thick opaque body slices (radiology)	E 1		100 p.b.w. PEM 11 30 p.b.w. E 1	+20 °C (+70 °F): 2-3 weeks	PEM 11:	10 kg	30 kg	1 year	
						E 1:	3 kg	9 kg		
PEM 27 (with E 1)	Standard PEM for thick body slices	E 1		100 GT PEM 27 30 GT E 1	+20 °C (+70 °F): 2-3 days +5 °C (+40 °F): 3-5 days	PEM 27:	10 kg	30 kg	1 year	Bring crystallized PEM into solution by heating to +50 °C to +60 °C (+120 °F to +140 °F). Stir well prior to use. Add hardener only after cooling.
						E 1:	3 kg	9 kg		
PEM 27 (with E 6)	Histological specimens	E 6	E 600	100 GT PEM 27 50 GT E 6 0,5 Vol.-% E 600	+20 °C (+70 °F): 5 days	PEM 27:	10 kg	30 kg	1 year	
						E 6:	5 kg	15 kg		
						E 600:	0.1 L	0.3 L		

1) p.b.w. = parts by weight