

RESIN	HARDENER	MIXING RATIO
REC 116 Component A	EH 212 Component B	100:15,5

DESCRIPTION: Two components epoxy system filled with abrasive fillers. Good mechanical properties. Long pot-life.

APPLICATIONS: Moulds for flexible polyurethane, for rigid polyurethane, simulated wood also of large size on metal frames. Press tools.

PROCESSING: Solid or face casting. Room temperature curing. The system can be filled with quartz (with ratio that is function of its particle size) until the limit of flowability is reached. In this way the thermal expansion coefficient of the product is reduced further on.

INSTRUCTIONS: Verify and, when necessary, homogenize the components before use. Add the proper quantity of the hardener to the resin, mix carefully. Avoid air trapping. Apply For the surface preparation (mould or model) refer to the release agents data sheet.

POST-CURING: The post curing, always advisable for RT curing systems in order to stabilize the component and to reach the best properties, is necessary when the component works at high temperature. Post cure the tool as stated in the table, increasing gradually 10°C/hour. The rate of healing and the indicated post-curing time are referred to standard specimen size. Users should evaluate the best conditions of curing or post-curing depending on the component size and shape. For big size components decrease the thermal gradient and increase the post-curing time.

STORAGE AND PRECAUTIONS: Epoxy resins and their hardeners can be stored two years in the original sealed containers stored in a cool and dry place. The hardeners are moisture sensitive therefore it is a good practice to close the vessel immediately after each use.

SYSTEM SPECIFICATIONS:

RESIN:	Density at 25°C (ASTM D 1475)	mPas	1.68 - 1.74
HARDENER:	Viscosity at 25°C	mPas	350 - 550

TYPICAL SYSTEM CHARACTERISTICS

PROCESSING DATA	EH 212
Resin colour	Yellow
Hardener Colour	Pale yellow
Density at 25°C hardener (ASTM D 1475)	0,95 –1,00 (g/ml)
Mixing ratio by weight(for 100 g. RESIN)	15,5 g.
Mixing ratio by volume (for 100 ml. RESIN)	27 ml.
Initial mixture viscosity at 25°C (EN13702-2) (*)	10.00 – 12.000 Mpa
Gelation time 25°C (15ml;6mm) (*)	h 4 – 6
Demoulding time 25°C (15ml;6mm) (*)	h 24 – 36
Post curing 60 °C	h 10 – 15
Maximum recommended thickness	mm 30

TYPICAL CURED SYSTEM PROPERTIES

Properties determined on specimens cured: 24 h TA + 15 h 60°C.

PROCESSING DATA	EH 234
Colour	Yellow
Machinability	Not machinable
Density	g/ml 1,5 - 1,7
Hardness^{25°C} (ASTM D 2240)	Shore D/15 90 - 92
Glass transition (T_g) (ASTM D 3418)	°C 70 - 75
Water absorption (24h RT)	% 0,07 - 0,09
Water absorption (2h 100°C)	% 0,40 - 0,50
Linear thermal expansion (T_g -10°C)	10 ⁻⁶ /°C 40 - 44
Linear thermal expansion (T_g +10°C)	10 ⁻⁶ /°C 128 - 132
Max recommended operating temperature (***)	°C 65 - 70
Flexural strength (ASTM D 790)	MN/m ² 40 - 45
Strain at break (ASTM D 790)	% 1,0 - 1,1
Flexural elastic modulus (ASTM D 790)	MN/m ² 5,400 - 5.800
Tensile strength (ASTM D 638)	MN/m ² 24 - 28
Elongation at break (ASTM D 638)	% 0,9 - 1,00
Compressive strength	MN/m ² 68 - 72

nd = not determined; na = not applicable; RT = TA = laboratory room temperature (23±2°C)

Conversion units: 1 mPas = 1 cPs 1MN/m² = 10 kg/cm² = 1 MPa

(*) for larger quantities pot life is shorter and exothermic peak increases

(**) the brackets mean optionality

(***) The maximum operating temperature is given on the basis of laboratory information available being it function of the curing conditions used and of the type of coupled materials. For further possible information see post-curing paragraph.

The information given in this publication is based on the present state of our technical knowledge but buyers and users should make their own assessments of our products under their own application conditions.