

RESIN	HARDENER	MIXING RATIO
401 Component A	EH 401 Component B	100:50
	EH 402/V Component B	100:50

DESCRIPTION: Two components colourless, transparent epoxy system. The system is based on a low viscosity unfilled resin and an amine hardener.
EH 401: Long pot-life. Low exothermic peak. The system can be used for casting till 3-5 cm furniture tops or casting till 10 cm thickness for 1 liter masses.
EH 402/V is an accelerated version of EH 401. The system can be used for casting till 1 cm thickness and surface finishing (e.g. lenticular labels). Good resistance toward UV. The exposure to UV for long time causes nevertheless a yellowing of the material. The use of EH 402/V in the weight ratio 100/45 promotes the development of high surface finishings.

APPLICATIONS: Castings and encapsulation which need proper transparency and resistance to yellowing.

PROCESSING: Manual casting. Undervacuum casting. Room temperature curing. EH 401: maximum recommended thickness 100 mm. EH 402/V: maximum recommended thickness 10 mm.

INSTRUCTIONS: Handling precautions:
Add the proper quantity of the hardener to the resin, mix carefully. Avoid air trapping. For some applications it can be useful pre-heat the components and/or carry on a deaeration step under vacuum of the mixture before casting.

POST-CURING: For room temperature curing system the post-curing allows the fast stabilization of the material and the obtainment of the best electrical and mechanical properties. During curing process it is advisable to avoid thermal variations higher than 10°C/hour.

STORAGE AND PRECAUTIONS: Epoxy resins and their hardeners can be stored respectively one year in the original sealed container 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:	Viscosity at 25°C (EN13702-2)	mPas	800 - 1.000
	Epoxy equivalent	g/equiv.	190 - 200
HARDENER:	Viscosity at 25°C	mPas	180 - 300

TYPICAL SYSTEM CHARACTERISTICS

PROCESSING DATA	EH 401	EH 402/V
Resin colour	Incolour	
Hardener Colour	Incolour	
Density at 25°C resin (ASTM D 1475)	g/ml 0,92 – 0,94	
Density at 25°C hardener (ASTM D 1475)	g/ml 0,94 – 0,96	
Mixing ratio by weight (for 100 g. RESIN)	g. 50	g. 50
Mixing ratio by volume (for 100 ml. RESIN)	ml. 56	ml. 56
Initial mixture viscosity at 25°C (EN13702-2) (*)	MPas 500 –800	MPas 500 –800
Gelation time 25°C (15ml;6mm) (*)	h 10 – 12	h 4 – 5
Gelation time 25°C (100ml) (*)	min. 180 – 220	min. 50 – 70
Exothermic peak at 25°C (50mm;200ml)	40 – 50 °C	100 – 110 °C
Demoulding time 25°C (15ml;6mm) (*)	h 36 – 48	h 18 – 24
Pot – Life (EN13702-2) (*)	min. 90 –110	min. 35 – 45
Post curing 60 °C	h 15	h 15
Maximum recommended thickness	mm 100	mm 10

TYPICAL CURED SYSTEM PROPERTIES

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

PROCESSING DATA	EH 401	EH 401/V
Colour	Colourless bright	Colourless bright
Hardness^{25°C} (ASTM D 2240)	Shore D/15 80 - 85	Shore D/15 80 - 85
Glass transition (T_g) (ASTM D 3418)	°C 45 - 50	°C 52 - 58
Max recommended operating temperature (***)	°C 50 - 55	°C 50 - 55
Flexural strength (ASTM D 790)	MN/m ² 73 - 82	MN/m ² 61 - 60
Strain at break (ASTM D 790)	% > 15	% > 15
Flexural elastic modulus (ASTM D 790)	MN/m ² 2.300 - 2.800	MN/m ² 2.000 - 2.500
Tensile strength (ASTM D 638)	MN/m ² 50 - 57	MN/m ² 40 - 49
Elongation at break (ASTM D 638)	% 5,0 - 7,5	% 6,0 - 9,5

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.