EPOLAM 2020

EPOXY LAMINATING SYSTEM

Tg 80°C

DESCRIPTION

The system is designed for the production of composite structures by usual wet lay-up methods,infusion, vacuum and low pressure injection as well as filament winding.

PROPERTIES

- *Variable reactivity by adding an accelerator*
- *Very low viscosity*
- *Excellent fabric wetting*
- *Good mechanical properties*
- *Good temperature resistance*
- *Hardener without Toxic label*

PHYSICAL PROPERTIES					
Composition		**RESIN**	**HARDENER**	**ACCELERATOR**	**MIXING**
Mix ratio by weight Mix ratio by volume at 25°C		100 100	34 41	0 to 10 -	
Aspect		liquid	liquid	liquid	liquid
Colour		colourless	colourless	colourless	colourless
Viscosity at 25°C (mPa.s)	BROOKFIELD LVT	1,600	40	1,300	550
Specific gravity at 25°C	ISO 1675 : 1985	1.17	0.96	1.10	1.11
Pot life at 25°C on 500 g (min)	Gel Timer TECAM			0 phr acc. : 120	
Gel time at 23°C on 500 g (min)	ASTM D 2471-99			0 phr acc : 100 10 phr acc : 20	

MECHANICAL PROPERTIES (1)			
Flexural modulus	ISO 178 :2001	MPa	3,100
Flexural strength	ISO 178 :2001	MPa	126
Tensile strength	ISO 527 :1993	MPa	78
Final hardness	ISO 868 :2003	Shore D15	88
Glass temperature transition	ISO 11359 : 2002	°C	80
Demoulding time at room temperature without accelerator	LT 051 : 1998	hr	48
Complete hardening time at room temperature	-	days	7

(1) : Average values obtained on standard specimens / Hardening 24 h *at room temperature and 16 h at 60°C and at different accelerator rates between 0 and 5 % in relation to the resin*

NB : *These values are determined on the pure resin (without any reinforcement)*

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PROCESSING CONDITIONS

After having selected the accelerator rate adapted and realised a mix according to the indicated ratio carry out impregnation of reinforcement materials (glass, aramid, carbon) by the appropriate methods. To obtain the temperature resistance and the maximum mechanical properties it is necessary to refer to the curves pages 3 and 4 in order to start the heat treatment. The operation can take place 16 to 24 hours after the application. In order to avoid any deformation risk it is advised to place the part on a conformer. Cure by plateau values. For example, the cycle for a maximum temperature of 100°C is the following: 3 hours at 40°C then 2 hours at 60°C, 2 hours at 80°C and x hours at 100°C (increase the temperature by 20°C per hour between the plateau values).

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :
Ensure good ventilation
Wear gloves, safety glasses and waterproof clothes.
For further information, please consult the product safety data sheet.

STORAGE CONDITIONS

Shelf life is 24 months in a dry place and in original unopened containers at a temperature between 15 and 25° C. Any open can must be tightly closed under dry nitrogen blanket.

PACKAGING

RESIN	***HARDENER***	***ACCELERATOR***
1 x 5 kg	*1 x 1.7 kg*	*1 x 1 kg*
1 x 20 kg	*1 x 6.8 kg*	*1 x 5 kg*
1 x 50 kg	*1 x 17 kg*	
1 x 200 kg	*4 x 17 kg*	

GUARANTEE

The information of our technical data sheet are based on our present knowledge and the result of tests conducted under precise conditions. It is the responsibility of the user to determine the suitability of AXSON products, under their own conditions before commencing with the proposed application. AXSON refuse any guarantee about the compatibility of a product with any particular application. AXSON disclaim all responsibility for damage from any incident which results from the use of these products. The guarantee conditions are regulated by our general sale conditions.

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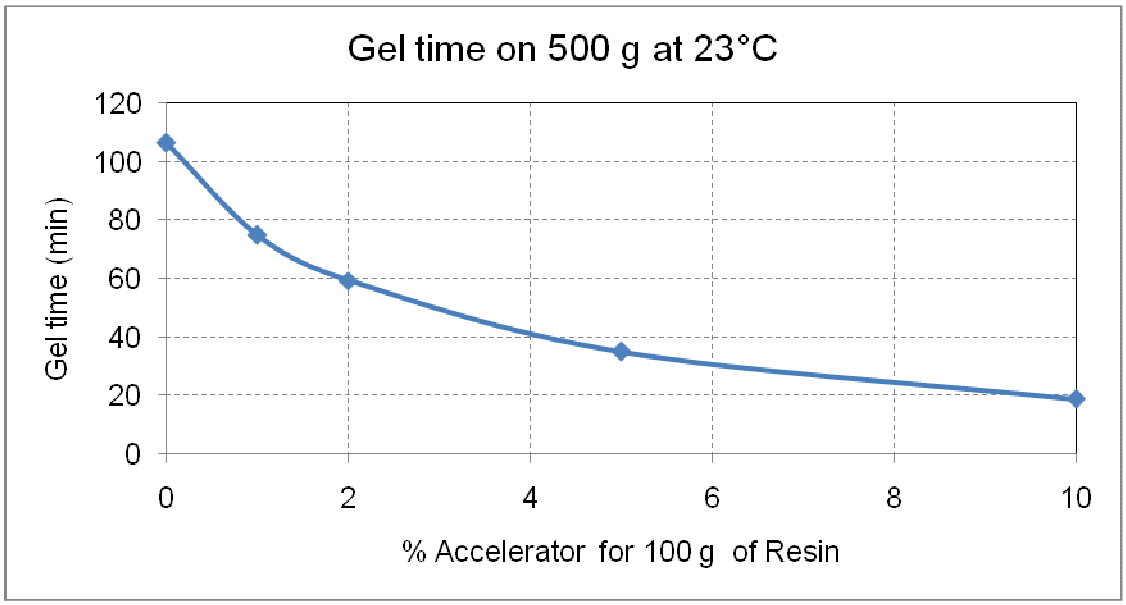
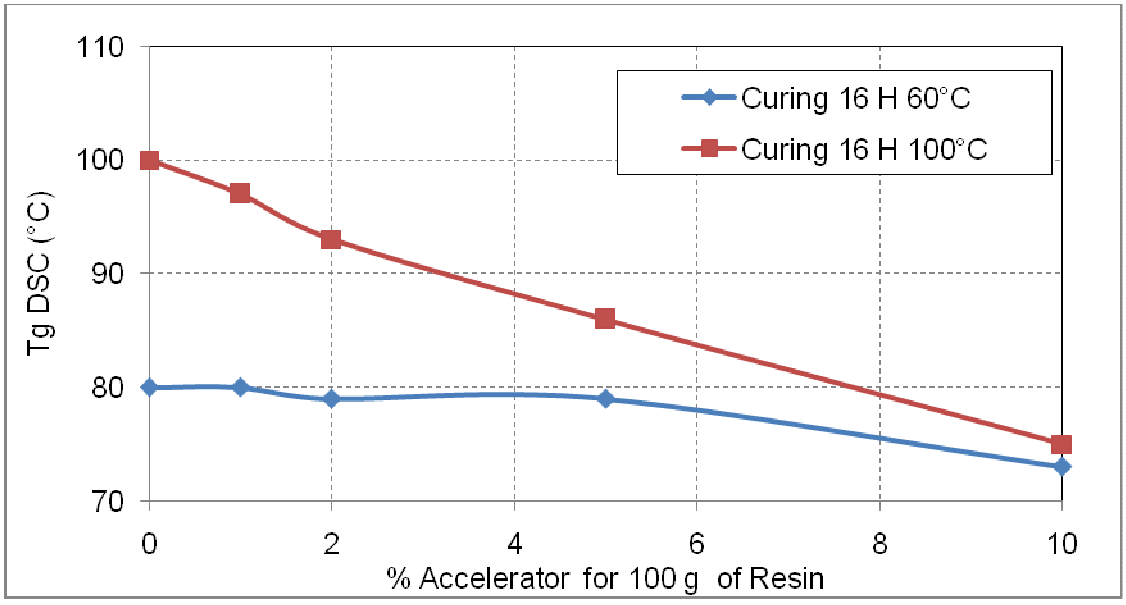
USING OF THE ACCELERATOR 2020

By using the accelerator 2020 with the EPOLAM 2020 resin a reactivity between 20 minutes and 1hr 50 can be achieved.



INFLUENCE OF THE ACCELERATOR 2020 ON THE TEMPERATURE RESISTANCE *

In accordance with the accelerator rate, the curves below point out the glass temperatures obtained according to the hardening cycles.



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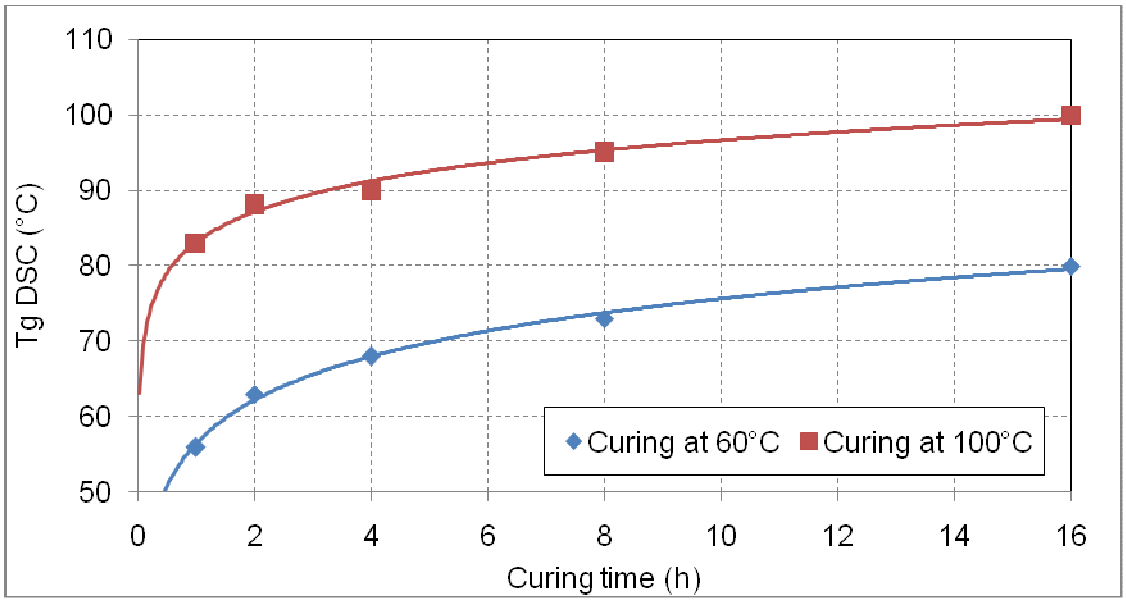
INFLUENCE OF THE CURING PERIOD ON THE TEMPERATURE RESISTANCE *

The curves below assess the curing time necessary to obtain the temperature resistance desired according to the hardening time.



**The tests are carried out on pure resin specimens (2 mm without reinforcement) which are hardened 24 hours at room temperature before the heat treatment.*

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