



TECHNICAL DATA SHEET

SikaBiresin® CR86 HT with CH138-10 hardener

(FORMERLY PROINFUSION HT)

EPOXY INFUSION SYSTEM HIGH TEMPERATURE USE, 530 CPS MIXED VISCOSITIES

DESCRIPTION

SikaBiresin® CR86 HT is designed for production of composite structures by infusion or other methods. It is for intermediate to high temperature use composite tools or parts. SikaBiresin® CR86 HT will set up to a hardened state with room temperature cure and has self-supporting properties after a 8 hour 140°F minimum initial cure.

PROPERTIES

- High clarity
- Long pot life – 309 minutes
- Very low mixed viscosity
- Excellent ultimate properties

PHYSICAL PROPERTIES – CR86/CH138-10

Composition	RESIN		HARDENER	MIXED	
	SikaBiresin® CR86		SikaBiresin® CH138 –10		
Mix ratio by weight	100		27	100/27	
Mix ratio by volume at 25 °C	100		32	100/32	
Aspect	Liquid		Liquid	Liquid	
Color	Clear		Lt. amber	Lt. Amber	
Viscosity at 25°C (Cps)	890		102	530	
Specific gravity at 25 °C	lbs./gal	ASTM D792	9.5	7.8	9.11
	(g/cc)		(1.14)	(0.94)	(1.09)
Gel time at 77°F (150 grams) (25°C)	(minutes)				250 - 360



MECHANICAL PROPERTIES at 23 °C (Neat cured properties)

Hardness	(Shore D)	ASTM D-2240	
*Cure #1			87
**Cure #2			88
Flexural Strength	(psi)	ASTM D-790	
*Cure #1			14,284
**Cure #2			12,768
Flexural Modulus	(psi)	ASTM D-790	
*Cure #1			382,498
**Cure #2			366,186
Tensile Strength	(psi)	ASTM D-638	
*Cure #1			8,496
**Cure #2			8,340
Tensile Modulus	(psi)	ASTM D-638	
*Cure #1			224,268
**Cure #2			222,459
Tensile Elongation	(psi)	ASTM D-638	
*Cure #1			4.9
**Cure #2			5.0
Glass transition temperature °F (°C) TMA		ASTM E1545	
*Cure #1			239 (15)
**Cure #2			280 (138)

* Cure #1 - 8 hr/140°F (60°C) + 4/hr/212°F (100°C)

** Cure #2 - 8 hr/140°F (60°C) + 8/hr/250°F (121°C)

MECHANICAL PROPERTIES at 23 °C (Composite cured properties)

Flexural Strength	(psi)	ASTM D-790	
*Cure #1			41,221
**Cure #2			38,737
Flexural Modulus	(psi)	ASTM D-790	
*Cure #1			2.45M
**Cure #2			2.25M
Tensile Strength	(psi)	ASTM D-638	
*Cure #1			39,247
**Cure #2			38,388
Tensile Modulus	(psi)	ASTM D-638	
*Cure #1			1.11M
**Cure #2			1.02M
Tensile Elongation	(psi)	ASTM D-638	
*Cure #1			5.4
**Cure #2			5.6

Infused laminate – 8 layer, 10 oz. glass, 0-90° rotation / Resin wt. content 30%

* Cure #1 - 8 hr/140°F (60°C) + 4/hr/212°F (100°C)

** Cure #2 - 8 hr/140°F (60°C) + 8/hr/250°F (121°C)

PROCESSING

After mixing according to the indicated ratio, carry out impregnation of the reinforcements.
To ensure an optimal use and a good impregnation, please use packaging stored at a temperature *above 20 °C*.

CURE CONDITIONS

In order to avoid any risk of distortion or tooling shrinkage a precise curing cycle must be observed.
Demolding takes place only after a 24 hour R.T. minimum plus eight hour pre-curing at 55°C-60°C.
For full properties require an additional full post-cure.

HANDLING PRECAUTIONS

Normal health and safety precautions should be observed when handling these products :

- Ensure good ventilation.
- Wear gloves, glasses and protective clothes.

For further information, please consult the Safety Data Sheets.

STORAGE CONDITIONS

- Shelf life of resin and hardeners are 12 months in original, unopened container stored in a dry 65-77°F (18-25°C) place.
- Repeated exposure to low temperatures during storage may cause the resin to crystallize. If this occurs, warm the resin to 120 - 140°F (49-60°C) and stir to dissolve the crystals. Any opened can must be tightly closed.

PACKAGING

Packaging information on request, please contact your local sales representative or find your local contact on www.sikaadvancedresins.us

LEGAL NOTICE

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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