MIXFILL 80

Epoxy trowelable fairing compound

MIXFILL 80 is a filled coating formulated based on flexibilized epoxy systems and with high mechanical performance at high percentages of elongation to break (8-15%) and a good impact resistance.

MIXFILL 80 coating is filled under vacuum with a complex of very low density fillers (~ 0.6) and low abrasive power in order to ensure greater sustainability of sanding and machining without scrub tools.
It provides:

- Excellent quality of application without microbubbles
- Very creamy mixture
- Ease of application to the rule or the spatula
- Excellent sandability with flat sanding or sander
- Very low clogging of the abrasive
- Great fineness of the film
- No drying shrinkage during drying
- Economic
- Low exotherm in thick
- Excellent impact resistance
- Ease of dosing by volume (1/1)

MIXFILL 80 coating is specially formulated for the finishing of the hulls of yachts, masters, osmosis treatments. **MIXFILL 80** coating applies without distinction to all areas (superstructures, bridge area, and underwater area). **MIXFILL 80** coating applies directly without prior sanding (if lap times are met) systems:

- Epoxy Primer EP 211

Never applies directly on the fonts and ferrous metals, steel and aluminium and alloys. These must be previously primerises with Epoxy Primer EP 211. **MIXFILL 80** coating is applied as an intermediate or finishing coating and can be covered by:

- SPRAYABLE FILLER 500 or EPOXYGUARD IM409 coatings
- The EP 213 UNDERCOAT or 215 HB
- Directly after sanding, on himself and coatings of load MIXFILL 10, 27, 100, on the composite epoxy, polyester *, vinylester * (* please consult us)
- On the wood and CP

Solvent-free epoxy coatings must be pumice and carefully dusted before any recovery.

Epoxy resin MIXFILL 80 Base

Appearance		paste
Color		grey
Gardner color		
Platine Cobalt Color Index		
Viscosity (mPa.s)	@ 15 °C	122000 ± 25000
	@ 20 °C	71900 ± 14400
	@ 25 °C	46700 ± 9400
	@ 30 °C	30000 ± 6000
	@ 40 °C	15000 ± 3000
Density	@ 20 °C	0,6500
Storage (months)	@ Ta	24
Dry extract %		100

Hardener(s)

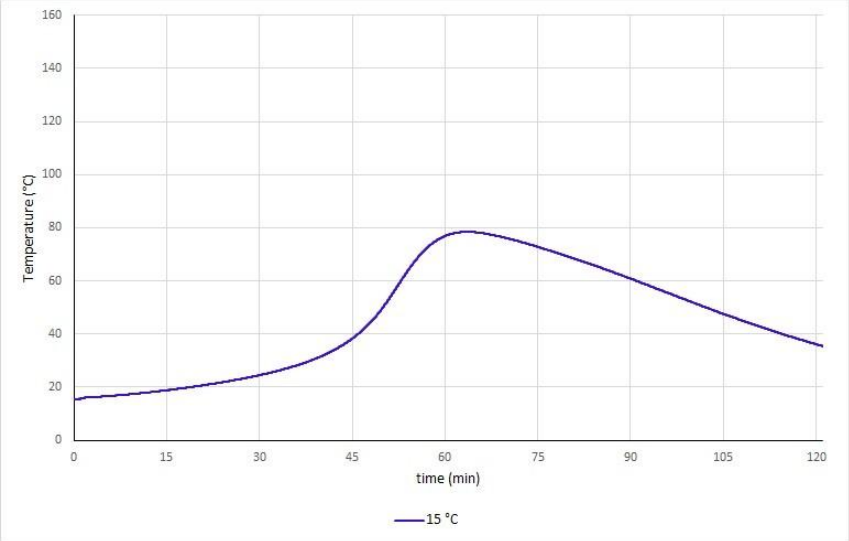
		MIXFILL 80 Standard Hardener
Appearance		paste
Color		white
Gardner color		
Platine Cobalt Color Index		
Reactivity level		Standard
Viscosity (mPa.s)	@ 15 °C	212000 ± 42500
	@ 20 °C	106000 ± 21200
	@ 30 °C	40000 ± 8000
	@ 40 °C	29000 ± 6000
Density	@ 20 °C	0,4800
Storage (months)	@ Ta	18
Dry extract %		100

Mixe(s) MIXFILL 80

		MIXFILL 80 Standard Hardener
Appearance		paste
Color		grey
Mixing ratio		
By weight		100 / 75
By volume		100 / 100
Initial viscosity	@ 20 °C	117500
PP 50 mm - 10 s-1 (mPa.s)	@ 30 °C	88000
Recommanded consumption	@ 25 °C	< 4 250
Spread rate (g/m²)	@ 25 °C	> 0,25
Recommended thickness (mm)	@ 25 °C	< 8

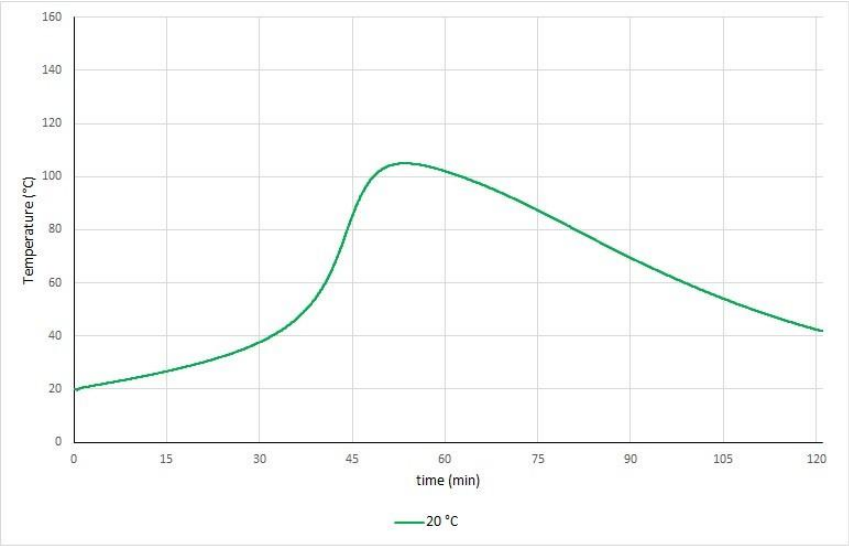
Reactivity @ 15 °C on 500 g MIXFILL 80

	MIXFILL 80 Standard Hardener
Exothermic temperature (°C)	88
Time to reach exothermic peak	61
Time to reach 50 °C (min)	46



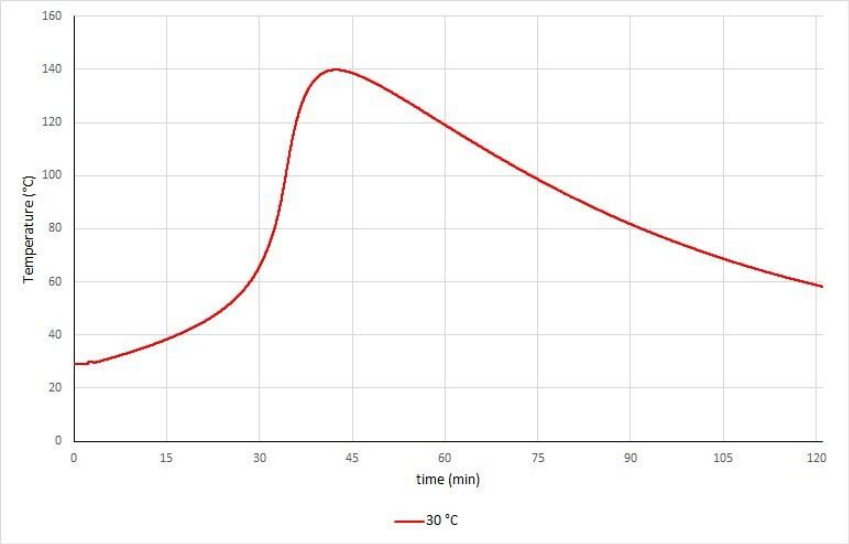
Reactivity @ 20 °C on 500 g MIXFILL 80

	MIXFILL 80 Standard Hardener
Exothermic temperature (°C)	111
Time to reach exothermic peak	52
Time to reach 50 °C (min)	34



Reactivity @ 30 °C on 500 g MIXFILL 80

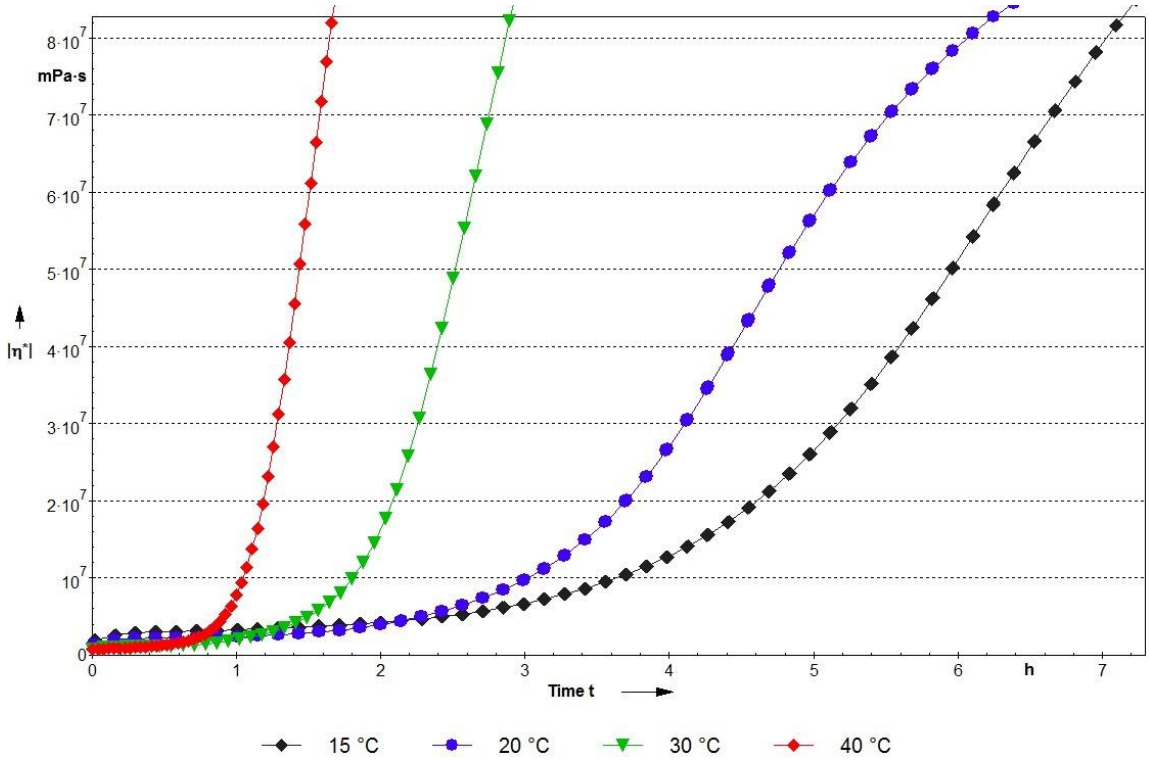
	MIXFILL 80 Standard Hardener
Exothermic temperature (°C)	140
Time to reach exothermic peak (min)	41
Time to reach 50 °C (min)	24



Reactivity on a 1 mm thick layer

	MIXFILL 80 Base / MIXFILL 80 Standard Hardener	
Substract temperature	20 °C	25 °C
Open time		
Overcoating		
Dust-free		
Gel time G'G"	8 h 30	2 h 45
Hard to the touch		
Sandable	16 h	12 h

@ 15, 20, 30 & 40 °C



Coating properties :

		MIXFILL 80 Base / MIXFILL 80 Standard Hardener		
Curing cycles →		48 H @ TA	24 H @ TA + 16 H à 60 °C	7 days @ TA
DSC glass transition				
TG1 onset	°C	39	42	40
TG1 max onset	°C		45	
Hardness				
Shore D 0-15s		57 - 52	58 - 53	58 - 53

Surface preparation:

Surfaces to be covered must be free of dirt, pollution due to fat, to water vapour, (the temperature of the medium must be at least 3 ° C above the dew point temperature - look at the table), dust or molding.

MIXFILL 80 is applied on itself, on epoxy, vinylester* or polyester* composite, on wood and plywood or any type of solvent-free coating after sanding and dusting. Solvent-free epoxy coatings must be imperatively sanded and carefully dusted before any coating (* consult us).

MIXFILL 80 is compatible with coatings of load MIXFILL 10, 27, and systems EP 211, EP 213 or 215 HB, EPOXYGUARD IM409 *, epoxy coatings MIX FILL 100, Sprayable Filler 500 and EPOXYGUARD IM409*, polystyrene foams, PVC and polyurethane. For any other type of coating and surface preparation of aluminum, zinc, galvanized, steel or any media already painted, consult our technical service or surface preparation guide.

Application:

Base and hardener must be thoroughly mixed for at least 5 minutes with a perfectly clean, very slow speed mixer. Mix until obtaining a smooth homogeneous appearance in color liquid. Degas mixture shearing and smoothing it on a flat, clean surface before implementation.

Dilution is not possible.

Cleaning solvent: MEK, acetone, alcohol, thinner EP N ° 3, EP no. 17 and EP no. 217.

Conditions of application:

Optimum: 20 to 25 ° C for 50-70% HR

Limit: 12 to 35 ° C for 30 to 80% RH

The temperature of the medium must be at least 3 ° C above the dew - point see table

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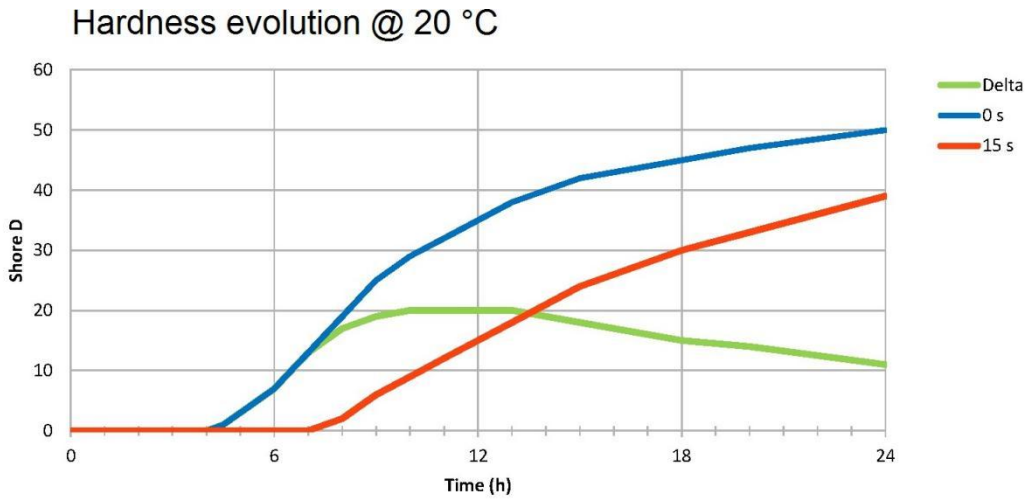
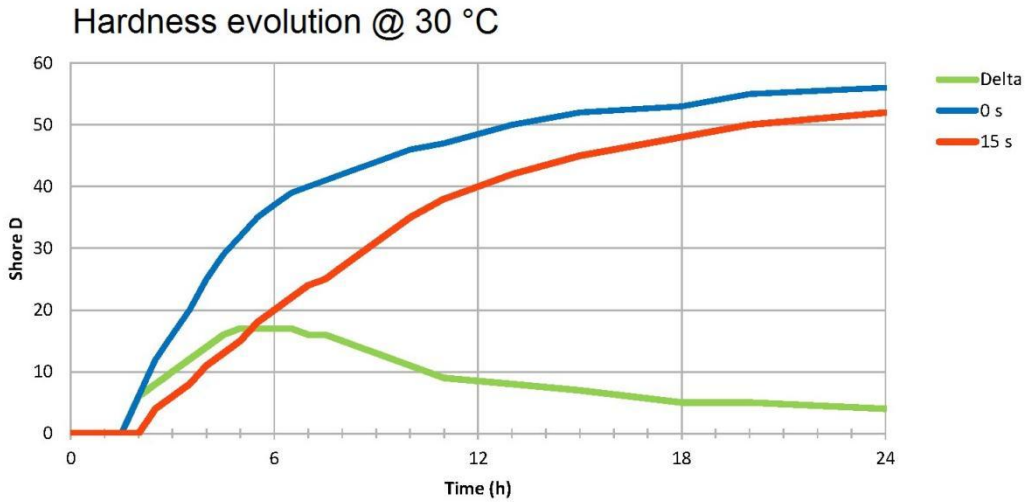
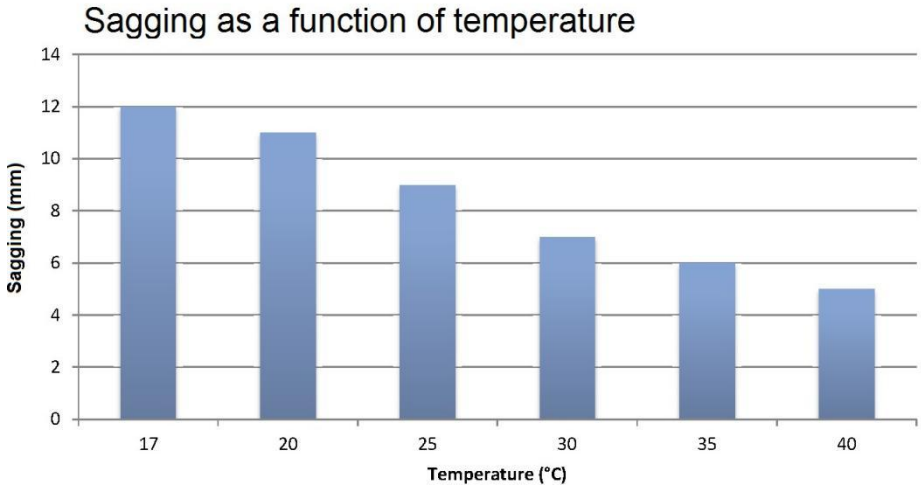
Sag test


Hardness evolution @ 20 °C
Shore D
Time (h)
Delta
0 s
15 s


Hardness evolution @ 30 °C
Shore D
Time (h)
Delta
0 s
15 s


Sagging as a function of temperature
Sagging (mm)
Temperature (°C)

Tests carried out on samples of pure cast resin, without prior degassing, between steel plates.

Measures undertaken according to the following norms:

Mechanical tests:

Tension:	*NF EN ISO 527-2:2012*
Flexion:	*NF EN ISO 178:2011*
Compression:	*NF EN ISO 604:2004 or NF EN ISO 844:2014 (foam product)*
Charpy impact strength:	*NF EN ISO 179-1:2010*
Shear Strength:	*ASTM D732–17 (Punch Tool)*
Interlaminar shrinkage strength:	*ASTM D5528-13*
Toughness (GIC et KIC) :	*ISO 13586:2000*
Water absorption:	*Internal. Polymerization according to cycle, machining, weighing, time spent in distilled water at 70 °C / 48 hours, weighing 1 hour after emerging,*

Thermal tests:

Glass transition DSC:	*NF EN ISO 11357-2:2014 -5°C to 180 °C under nitrogen gas*	
	T_{G1} or Onset:	*1st scan at 20 °C/min*
	T_{G1} maximum or Onset:	*2nd scan at 20 °C/min*
Glass transition DTMA:	*Temperature ramp 0 °C to 180 °C @ 2°C/min under normal atmosphere*	
	NF EN ISO 11357-1:2016	*T_G onset G'*
	ASTM D4065-12	*T_G peak G"*

Physical tests:

Gardner color:	*NF EN ISO 4630:2016*	*Visual method*
Refractive index:	*NF ISO 280:1999*	
Viscosity:	*NF EN ISO 3219:1994*	*Rheometer 50 mm, shear 10 s^{-1}*
Density on liquids:	*ISO 2811-1:2016*	*Pycnometer*
Density on solid:	*NF EN ISO 1183-3:1999*	*Helium Pycnometer*
Density on foam:	*NF EN ISO 845:2009*	
Gel time:	*Cross G' G"*	*Rheometer CP50 - Shear rate 10 s^{-1}*
Green Carbone content:	*ASTM D6866-16 or XP CEN/TS 16640 Avril 2014*	
TA:	*Ambient temperature*	

LEGAL NOTES:

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If our responsibility should nevertheless be involved, it would be, for all the damages, limited to the value of the goods supplied by us and processed by the customer. We guaranty the non-reproachable quality of our products, in the general context of sales 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.