SR CA 85

wedging & casting epoxy system

Filled epoxy resin for :
- wedging and casting
- Cure under water
- Compressive and fire resistance

3 hardeners for varying thickness and reactivity

Epoxy resin CA 85

Aspect / colour		Pasty, white
Viscosity (m.Pas ±3000)	20 °C 25 °C	80 000 60 000
Density (g/cm³ ±0.005)	20 °C	1.578
Storage stability (10–25 °C)		2 years, crystallisation free decantation after long storage

Hardeners SD

Products		SD 8451	SD 8601	SD 7160
Reactivity:		Slow	Very Slow	Ultra slow
Aspect / color		LIquid, yellow	Liquid, yellow	Liquid, clear
Viscosity (m.Pas ±10)	20 °C 25 °C	140 90	18 15	120 70
Density (g/cm³ ±0.005)	20 °C	0.980	0.951	0.983

Resin CA 85 / Hardeners blend

System		CA 85 / **SD 8451**	CA 85 / **SD 8601**	CA 85 / **SD 7160**
Blend viscosity (m.Pas ±300)	20 °C 25°C	3700 3100	2400 1950	4000 2800
Parts by weight		100 g / 25 g	100 g / 17.5 g	100 g / 24 g
Parts by volume		100 / 40	100 / 30	100 / 40
Density of cured systems (kg / l)		1.43	1.49	1.34

CA 85 - Blend Reactivity

Systems CA 85 /…..	Temperature / thickness	SD 8451	SD 8601	SD 7160
Exothermic temperature (°C) (center of sample)	25°C / 5 cm	157 °C	127 °C	38 °C
	20°C / 8 cm	162 °C	125 °C	41 °C
Time to reach the exotherm	25°C / 5 cm	1 h 55	4 h 00	6 h 30
	20°C / 8 cm	2 h 00	6 h 30	10 h 00
Time to come back to 30 °C at the interface	25°C / 5 cm	4 h 30	6 h 30	16 h 15
	20°C / 8 cm	6 h 30	9 h 30	

Cast thickness

Systems CA 85 /…..		SD 8451	SD 8601	SD 7160
Product and ambient temperature	25 °C	4 cm	5 cm	6 cm
	20 °C	6 cm	7 cm	10 cm

Curing

CA 85 epoxy systems cure at ambient temperature.
Full cure after: 7 days 25 °C or 48 hr 30 °C or 12 hr 40 °C or 6 hr 60°C

Packaging (kg)

Kits	Mixing volume	Resin CA 85	Hardener SD 8451	Hardener SD 8601	Hardener SD 7160
31.26 kg	22 liters	25 kg	2 x 3.13 kg		
29.38 kg	20 liters	25 kg		4.38 kg	
31.00 kg	22 liters	25 kg			2 x 3 kg

Safety data - (EEC Classification 67 / 548 / EEC Directives)

Products	Labels		Risks Phrases
CA 85		Xi: Irritating N : Dangerous for the environment	R 36/38: Irritating to eyes and skin R 51/53: Harmful to aquatic organism, may cause long term adverse effects in aquatic environment R 43: May cause sensitisation by skin contact
SD 8601 **SD 8451** **SD 7160**		C: Corrosive	R 21/22: Harmful by skin contact and if swallowed R 34: Causes burn R 43: May cause sensitisation by skin contact

Casting resin / Mechanical properties

CA 85 / …..		SD 8451		SD 8601		SD 7160
Cycle of polymerisation		48 h 25 °C + 16 h 60 °C				
Temperature during test		23 °C	60 °C	23 °C	60 °C	23 °C
Flexion (4 points)						
Modulus of elasticity	N/mm²	5300		6300		
Flexion (3 points)						
Modulus of elasticity	N/mm²					4600
Maximum resistance	N/mm²	68	40	68	51	45
Elongation at max. resistance	%	2.8	4.5	2.4	2.8	1.1
Compressive						
Compressive Yield strength	N/mm²	106	68	105	69	65
Offset compressive yield	%	10.5	8.3	8.9	7.6	7.4
Tensile						
Modulus of elasticity	N/mm²	3850		5400		
Maximum resistance	N/mm²	29		29		
Resistance at break	N/mm²	29		29		
Elongation at max. resistance	%	0.8		0.7		
Elongation at break	%	0.8		0.7		
Charpy impact strength						
Resilience	Kj/m²	5		5		
Glass Transition / DSC						
Tg 1	°C	64		64		75
Tg 1 max	°C	69		79		78

Tests carried out on samples of pure cast resin, without prior degassing, between steel plates.
Measures undertaken according norms :

- *Flexion (3 points) : DIN 53452 / ISO 178*
- *Compressive : DIN 53454*
- *Tensile : NF T 51_034*
- *Choc Charpy: NF T 51-035*
- *Glass transition: DSC*

  Tg1: 1st point à 10°C / mn
  Tg 1 max.: 2nd passage 180°C

Reactivity of the system CA 85 / SD …