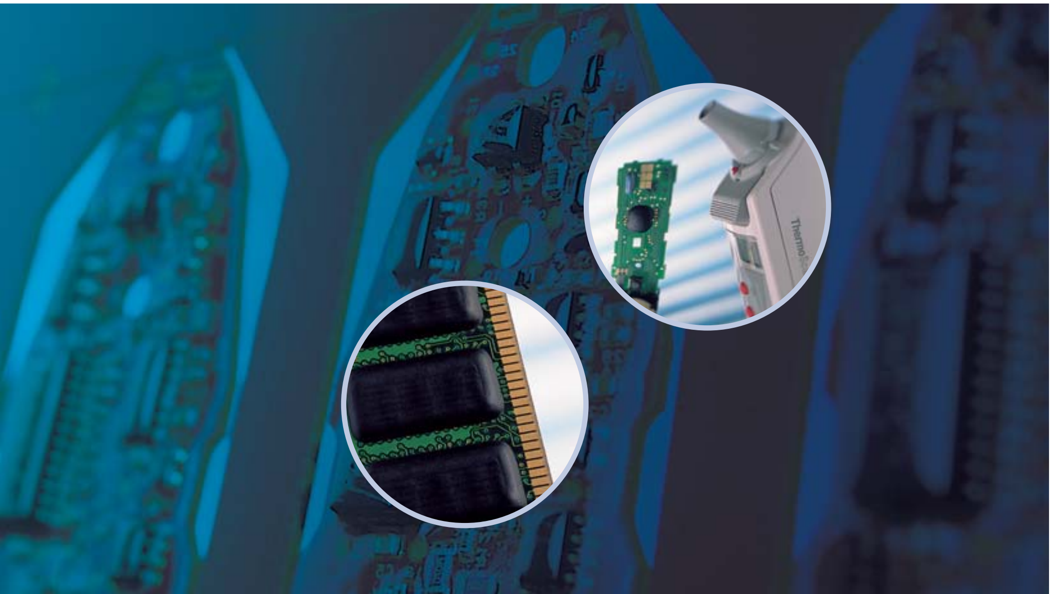

SELECTOR GUIDE

GLOB TOP ENCAPSULANTS

GLOB TOP ENCAPSULANTS - DAM-AND-FILL ENCAPSULANTS

The worldwide leader in adhesive pastes and film materials for semiconductor packaging and microelectronic assembly.

A global supplier of electronic materials, polymer thick films, specialty coatings, process lubricants and lubricant application equipment.

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Product	Chemistry	SUBSTRATE			Viscosity at 25°C (Pa.s)	Work Life at 25°C	Recommended Cure Schedule(s)	d/h Ratio(1)	Thermal Expansion Coefficient (10-6/°C) Typical Value	Glass Transition Temperature (°C) Typical Value	Features
		Polymeric	Ceramic	Flex							
Glob Top Encapsulants											
STYCAST™ 50300 LT	Epoxy	•			# 6 @ 2,5 rpm : 45 – 65 # 6 @ 20 rpm : 20 – 30	3 days	2 h @ 150°C or 1 h @ 120°C + 1 h @ 150°C (2)	> 6,5	18	165	One component, low thixotropy encapsulant for use on polymeric substrates. Used where maximum flow is required, a high degree of flow-out is permissible, but a dam is not desired.
STYCAST 50300 LV	Epoxy	•			# 6 @ 2,5 rpm : 75 – 95 # 6 @ 20 rpm : 25 – 35	3 days	2 h @ 150°C or 1 h @ 120°C + 1 h @ 150°C (2)	4,5 – 6,5	18	165	One component, moderate to low thixotropy and low viscosity encapsulant. Used where medium to high flow is required and a medium to high degree of flow-out on the substrate is permissible.
STYCAST 50300-1	Epoxy	•			# 6 @ 2,5 rpm : 90 – 110 # 6 @ 20 rpm : 35 – 45	3 days	2 h @ 150°C or 1 h @ 120°C + 1 h @ 150°C (2)	4,0 – 5,5	18	165	One component, moderate thixotropy encapsulant. Used where medium to low flow is required. Produces a medium glob profile in the STYCAST 50300 family.
STYCAST 50300 HT	Epoxy	•			# 6 @ 2,5 rpm : 120 – 140 # 6 @ 10 rpm : 55 – 75	3 days	2 h @ 150°C or 1 h @ 120°C + 1 h @ 150°C (2)	< 4,5	18	165	One component, high thixotropy and moderate viscosity encapsulant. Used where minimum flow is required and a very low degree of flow-out is accepted. Produces the highest glob profile.
STYCAST 50400-1	Epoxy	•	•	•	# 6 @ 10 rpm : 55 – 85	1 week	30 min @ 120°C or 5 min @ 120°C – 130°C (3)	4,5 – 6,0	35	95	One component, moderate thixotropy, fast and low temperature cure encapsulant. Provides very good adhesion on a wide range of substrates : glass or mat epoxy, polyester, polyimide, etc.
STYCAST S 7503	Silicone	•	•		# 6 @ 10 rpm : 60 – 70	1 week	1 h @ 150°C	-	N/A	N/A	One component, low stress, low modulus encapsulant with exceptional adhesion. Used for coverage of very large ICs and applications on thin substrates.
STYCAST S 7503-5	Silicone	•	•		# TD @ 20 rpm : 80 – 100	1 week	1 h @ 150°C	-	N/A	N/A	Higher thixotropic version of STYCAST S 7503.
STYCAST S 7503 TL	Silicone	•	•		# 6 @ 10 rpm : 80 – 100	1 week	1 h @ 150°C	-	N/A	N/A	One component, thixotropic, translucent silicone elastomer.
Dam-and-Fill Encapsulants											
STYCAST 50500 D	Epoxy	•	•		$\dot{\gamma}$ = 1,5 s^{-1} : 120 – 140 $\dot{\gamma}$ = 15 s^{-1} : 20 – 40	3 days	2 h @ 150°C or 1 h @ 100°C + 1 h @ 150°C (2)	< 2,0	70	78	One component, low stress, low modulus "dam" encapsulant. Designed for temperature cycling ranges from –65°C to +150°C.
STYCAST 50500-1	Epoxy	•			# 6 @ 2,5 rpm : 25 – 45 # 6 @ 20 rpm : 25 – 45	24 hours	2 h @ 150°C or 1 h @ 100°C + 1 h @ 150°C (2)	N/A	20	150	One component, low thixotropy and medium viscosity "fill" encapsulant. Both "dam" and "fill" materials can be co-cured.
STYCAST 50500-2	Epoxy	•	•		# 6 @ 2,5 rpm : 20 – 25 # 6 @ 20 rpm : 4 – 6	4 days	2 h @ 150°C or 1 h @ 100°C + 1 h @ 150°C	N/A	70	78	One component, low warpage, low modulus "fill" encapsulant. Both "dam" and "fill" encapsulants can be co-cured.