



Glob Top Dam-N-Fill is a semiconductor technique that **protects fragile die and wire bonds**. This technique uses a two step process. First, a thixotropic barrier epoxy is applied around a chip (*dam*), then the cavity is then filled with a low viscosity, optically clear epoxy (*fill*). **EPO-TEK®** Dam-N-Fill adhesives are often preferred when the encapsulation material needs to have specific optical transmission properties, as well as protection from environmental factors. This method is a space saver on Printed Circuit Boards (PCBs) by optimizing space that is wasted by leads. It also reduces cost by eliminating the need for Surface Mounted Device (SMD) package chips.

	EPO-TEK	NO. of COMPONENTS	COLOR Before/After CURE (thin film)	CURE TEMPERATURE (minimal)	VISCOSITY @ 23°C	GLASS TRANSITION TEMPERATURE (Tg)	DIE SHEAR STRENGTH @ RT (80mil x 80mil)	INDEX OF REFRACTION (Nd)	SPECTRAL TRANSMISSION	TGA DEGRADATION TEMPERATURE	CTE Below Tg/ Above Tg (in/in/°C)	POT LIFE (@ room temp.)	SHELF LIFE (@ room temp.)	
DAM	EPOXY	353ND-T	Two	Tan/Dark Red	150°C – 1 min 80°C – 30 min	9,000-15,000 cPs @ 20 rpm	≥15 kg/5,100 psi	N/A	N/A	409°C	43 x 10 ⁻⁶ 231 x 10 ⁻⁶	3 hours	1 year	
		730	Two	Tan/Tan	150°C – 1 hour 80°C – 2 hours 23°C – 24 hours	80,000–120,000 cPs @ 2.5 rpm	≥10 kg/3,400 psi	N/A	N/A	364°C	66 x 10 ⁻⁶ 248 x 10 ⁻⁶	1 hour	1 year	
		H70E-2	Two	Black/Black	175°C – 1 min 80°C – 90 min	9,000-15,000 cPs @ 20 rpm	>5 kg/1,700 psi	N/A	N/A	447°C	20 x 10 ⁻⁶ 112 x 10 ⁻⁶	2 days	1 year	
	UV	OG116-31	One	White/White	100mW/cm ² for >2 min @ 320-500 nm	20,000-30,000 cPs @ 10 rpm	≥115°C	≥10 kg/3,400 psi	1.5662	>96% @ 660-1640 nm >92% @ 500 nm	409°C	41 x 10 ⁻⁶ 170 x 10 ⁻⁶	N/A	1 year
		OG147-7	One	White/White	100mW/cm ² for 3 min @ 320-500 nm	30,000-40,000 cPs @ 10 rpm	>70°C	>20 kg/6,800 psi	1.5690	>83% @ 800-2000 nm >78% @ 580-800 nm >56% @ 400-580 nm	414°C	45 x 10 ⁻⁶ 190 x 10 ⁻⁶	N/A	1 year
		OG198-55	One	Cloudy/Cloudy	100mW/cm ² for >2 min @ 320-500 nm	1765 cPs @ 100 rpm	131°C	20.5 kg/6,970 psi	1.5034	> 97% @ 520-1680	354°C	N/A	N/A	1 year refrigerated
FILL	EPOXY	301	Two	Clear/Colorless	65°C – 1 hour 23°C – 24 hours	100-200 cPs @ 100 rpm	>65°C	>10 kg/3,400 psi	1.5190	>98% @ 400-700 nm 97% @ 700-2500 nm	430°C	39 x 10 ⁻⁶ 98 x 10 ⁻⁶	1-2 hours	1 year
		301-2	Two	Clear/Colorless	80°C – 3 hours 23°C – 2 days	225-425 cPs @ 100 rpm	>80°C	>15 kg/5,100 psi	1.5318	>99% @ 400-1200 nm 98% @ 1200-1600 nm	360°C	61 x 10 ⁻⁶ 180 x 10 ⁻⁶	8 hours	1 year
		310M	Two	Clear/Colorless	65°C – 2 hours 23°C – 24 hours	450-850 cPs @ 100 rpm	≤30 °C	≥2 kg/680 psi	1.4969	> 97% @ 400-1300 nm > 90% @ 1400-2200 nm	397°C	78 x 10 ⁻⁶ 222 x 10 ⁻⁶	2 hours	1 year
		310M-2	Two	Clear/Colorless	65°C – 2 hours 23°C – 24 hours	250-325 cPs @ 100 rpm	<30°C	>5 kg/1,700 psi	1.4947	>98% @ 380-1660 nm	331°C	67 x 10 ⁻⁶ 201 x 10 ⁻⁶	1.5 hours	1 year
		377	Two	Amber/Dark Amber	150°C – 1 hour	150-300 cPs @ 100 rpm	≥95°C	≥10 kg/3,400 psi	1.5195	>99% @ 600 nm >95% @ 1000-1500 nm	375°C	57 x 10 ⁻⁶ 210 x 10 ⁻⁶	24 hours	1 year
	UV	OG142-87	One	Clear/Colorless	100mW/cm ² for 2 min @ 320-500 nm	250-600 cPs @ 100 rpm	≥100°C	20 kg/6,800 psi	1.4928	>97% @ 580-1660 nm	384°C	50 x 10 ⁻⁶ 162 x 10 ⁻⁶	N/A	1 year refrigerated
OG142-112	One	Clear/Colorless	100mW/cm ² for 2 min @ 320-500 nm	1,200-1,700 cPs @ 100 rpm	>90°C	25 kg/8,500 psi	1.5395	>97% @ 500-1660 nm	384°C	55 x 10 ⁻⁶ 158 x 10 ⁻⁶	N/A	1 year refrigerated		

N/A - not applicable, as these are filled systems



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