Adhesives for Plastics

Adhesives in this table will bond plastics; additional uses are potting and coating.

Product	300-390 nm Light (Spot)	390-500 nm Light (Flood)	LED 385 nm Light	Heat	Activator	Moisture	2-Part Mixture	Also Bonds to Metal	Also Bonds to Glass	Features	Nominal Viscosity cP (20 rpm)	Durometer Hardness	Tensile at Break, MPa [psi]	Elongation at Break, %
… products for bonding														
3013	•	•	•					•		Moisture resistant; resilient	150	D70	18 [2,400]	70
3022	•	•	•							Hybrid acrylated urethane/epoxy for plastic and glass; high strength; tack free	500	D80	47 [6,800]	11
3025	•	•	•					•	•	General purpose	300	D65	17 [2,400]	70
3069	•	•	•							General purpose	450	D55	17 [2,400]	175
3086-T	•	•	•					•	•	UL-94V0 rated	6,700	D85	50 [7,250]	4
3099	•	•	•						•	Excellent glass, polycarbonate, and PMMA bonder	150	D75	19 [2,800]	170
3221-SC	•							•	•	General purpose; See-Cure technology	300	D55	12 [1,700]	220
MR290						•				Cyanoacrylate; resists moisture, humidity, & extreme temperatures	250-350	N/A	N/A	<2
RX50						•		•		Cyanoacrylate; rapid curing; high-performance grade	30-70	N/A	N/A	<2
… form-in-place/cure-in-place gaskets														
GA-105	•							•		Gel form-in-place gasket; soft and sticky	40,000	00-70	1.3 [190]	140
GA-140	•							•		Gel form-in-place gasket; tack free; low outgassing; resists moisture and chemicals	39,000	A35	1.5 [211]	167
… products for potting														
3-20796	•	•								Flexible; fast, deep curing	3,200	D40	15 [2,200]	500
… products for coating														
9-20557	•	•		•						Flexible for thermal cycling; MIL/IPC/UL recognized	2,500	D60	20 [3,000]	120
9481	•	•	•			•		•	•	Dual-Cure; light/moisture-cure conformal coating	125	D75	22 [3,200]	4

Typical Applications

						
Touch Screen Displays, Heads-Up Displays	White Appliances: Control Panels, Displays, Circuit Boards, Electrical	Side-Mounted Lights and Turn Signals	Power Tools: Circuitry, Control Panels, Electrical, Bodies, Motors	Motor and Magnet Assembly	Household Appliances: Housing, Electrical, Control Panels, Circuitry	Rearview Mirror Attachment

Adhesion Chart for Plastic Substrates

This table shows adhesives from the previous page that are suggested for bonding with the following substrates.
● = Recommended adhesive
ST = Surface treatment required in addition to adhesive (plasma, corona, UV, chemical, etc.)

Bonds These Substrates	Adhesives													
	3013	3022	3025	3069	3086-T	3099	3221-SC	MR290	RX50	GA-105	GA-140	3-20796	9-20557	9481
Plastic Substrates														
ABS	●	●	●	●	●	●	●	●	●	●	●	●	●	●
CAP	●			●	●	●				●	●	●	●	●
HDPE/LDPE	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST		ST
PA 6-6	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PC	●	●	●	●	●	●	●	●	●	●	●	●		●
PC/ABS	●	●	●	●		●	●			●	●			
PC/PCTG	●	●	●	●	●	●	●			●	●			
PCTG	●			●	●	●				●	●	●		●
PEEK	●									●	●	●	●	●
PEI		●	●	●	●	●	●			●	●	●		●
PET	●	●	●	●		●	●			●	●	●	●	
PETG		●	●	●		●	●			●	●	●	●	
PI	●	●	●	●	●	●	●			●	●	●		
PMMA	●	●	●	●	●	●	●	●		●	●	●		●
PP	ST	ST	ST	ST	ST	ST	ST			●	●	ST		ST
PPO				●	●	●				●	●	●	●	●
PS	●	●	●	●	●	●	●			●	●	●		
PU	●	●	●	●	●	●	●			●	●	●		
PVC rigid	●	●	●	●	●	●	●	●	●	●	●	●	●	
PVC flexible	●	●	●	●	●	●	●	●	●	●	●	●	●	
SAN	●	●	●		●	●	●			●	●	●		●
TPU	●	●	●	●		●	●			●	●	●		
Bonds These Other Substrates (metals, ceramics, glass)														
ALUMINUM T3		●	●	●			●	●	●	●	●	●		
ALUMINUM 2024		●	●	●			●	●	●	●	●	●		
BRASS								●	●	●	●	●		
CERAMIC	●	●	●	●		●	●	●				●	●	●
C.R. STEEL								●	●	●	●		●	
COPPER								●	●	●	●	●	●	
FR-4		●	●	●	●	●	●	●	●	●	●	●	●	●
GLASS		●	●	●	●	●	●	●	●			●	●	
STAINLESS STEEL 13	●	●	●				●	●	●	●	●	●	●	
STAINLESS STEEL 304	●	●	●				●	●	●	●	●	●	●	

Adhesives for Metal and Glass

Adhesives in this table will bond metals and glass; additional uses are potting and thread locking.

Product	300-390 nm Light (Spot)	390-500 nm Light (Flood)	LED 385 nm Light	Heat	Activator	Moisture	2-Part Mixture	Also Bonds to Plastic	Features	Nominal Viscosity cP (20 rpm)	Durometer Hardness	Tensile at Break, MPa [psi]	Elongation at Break, %
… products for bonding													
425	•								Clear; high strength; dishwasher safe	4,000	D80	43 [6,200]	7
429	•								Clear; low yellowing with UV exposure; high strength; resilient	2,500	D60	21 [3,000]	120
4-20418	•	•	•					•	Clear; low stress for glass bonding and laminating	450	D60	11.4 [1,650]	130
6-621	•	•	•	•	•			•	Multi-Cure®; tough and resilient for interfacial and potting applications	800	D80	14 [2,100]	180
6-625 SV01-Rev A	•	•	•	•	•				Flexible; low stress; bridge bonding; no gap; structural reinforcement of spring clips; for chokes, ferrite cores, and transformers	10,000	D50	23 [3,400]	26
846-GEL				•	•				High-performance and high-strength structural adhesive; fixes < 60 seconds with 501-E activator; full cure 24 hours; also cures at 50°C for 15 minutes; free of acrylic acid, non-corrosive; for E-cores, ferrite, motor housings, and applications needing impact/shock resistance	30,000	N/A	N/A	N/A
8-20626				•	•				High-viscosity; epoxy structural adhesive; induction cure; black; fixes in 3 seconds/1.5 kW or 8 mins/180°C; for DC motors, magnet-to-can, and inconsistent gaps	110,000	D85	55 [8,000]	2
… form-in-place/cure-in-place gaskets													
GA-108	•							•	Form-in-place; soft/sticky; black	45,000	00-65	0.4 [63]	200
GA-111	•							•	Moisture and chemical resistant; form-in-place; no tack; black	40,000	A40	1.0 [140]	140
GA-120	•							•	Soft/tacky; self-leveling viscosity; low-durometer resin; quick curing; no silicone/solvents	1,000	00-50	0.14 [20]	110
GA-140	•							•	Soft; no tack; clear; low outgassing; quick curing; no silicone/solvents; conforms to intricate recesses; resists tears	39,000	A35	1.5 [211]	167
… products for potting													
ER1196/ CT1196							•	•	2-part epoxy; flexible; long pot life	Resin: 15,500 Catalyst: 6,000	D60	5.7 [820]	19

Adhesion Chart for Metal and Glass Substrates

This table shows adhesives from the previous page that are suggested for bonding with the following substrates.
● = Recommended adhesive
ST = Surface treatment required in addition to adhesive (plasma, corona, UV, chemical, etc.)

Bonds These Substrates	Adhesives											
	425	429	4-20418	6-621	6-625-SV01 Rev A	846-GEL	8-20626	GA-108	GA-111	GA-120	GA-140	ER1196/ CT1196
Metal Substrates												
ALUMINUM T3	●	●	●	●	●	●	●	●	●	●	●	●
ALUMINUM 2024	●	●	●	●	●	●	●	●	●	●	●	●
BRASS	●		●	●	●	●	●	●	●	●	●	●
COPPER	●			●	●	●	●	●	●	●	●	●
C.R. STEEL	●	●	●	●	●	●	●	●	●	●	●	●
FR-4	●	●		●	●	●		●	●	●	●	●
STAINLESS STEEL 13	●	●		●	●	●	●	●	●	●	●	●
STAINLESS STEEL 304	●	●		●	●	●	●	●	●	●	●	●
Bonds These Other Substrates (plastics, ceramics, glass)												
ABS	●	●	●	●	●			●	●	●	●	●
CAP	●		●	●				●	●	●	●	●
CERAMIC	●			●	●	●						●
GLASS	●	●	●	●	●	●	●					●
HDPE/LDPE	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST
PA/6-6			●	●	●			●	●	●	●	●
PC			●	●				●	●	●	●	●
PC/ABS								●	●	●	●	●
PC/PCTG								●	●	●	●	●
PCTG			●	●	●			●	●	●	●	●
PEEK	●		●					●	●	●	●	●
PEI			●	●				●	●	●	●	●
PET			●	●	●			●	●	●	●	●
PETG			●					●	●	●	●	●
PI			●	●	●			●	●	●	●	●
PMMA	●		●	●				●	●	●	●	●
PP	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	ST	●
PPO			●					●	●	●	●	●
PS			●					●	●	●	●	●
PU				●	●			●	●	●	●	●
PVC rigid	●	●	●	●	●			●	●	●	●	●
PVC flexible		●	●	●	●			●	●	●	●	●
SAN		●	●	●				●	●	●	●	●
TPU		●	●					●	●	●	●	●