

Substrate Selector Guide

Simply determine which substrates you're bonding and find the adhesive recommendations in the table below. Refer to the previous charts for typical performance properties of the recommended adhesive. These recommendations should be used as a starting point only. It is recommended to evaluate the selected product in your application to determine suitability.

Loctite® Hysol® Epoxy & Urethane Adhesives Bond to a Variety of Substrates

	Metals	Thermo- plastics	Thermoset Plastics	Rubber	Glass	Ceramic	Masonry	Wood	Leather	Paper/ Hardboard
Metals	E-20NS™ E-214HP™ U-05FL™	U-05FL™ E-40FL™ E-20HP™	E-20NS™ E-20HP™ E-120HP™	U-05FL™ E-40FL™ U-09LV™	E-30CL™ E-20NS™ U-05FL™ 0151™	E-20HP™ E-30CL™ E-20NS™	E-20HP™ E-120HP™ E-20NS™ 9432NA™	E-20HP™ E-40FL™	U-05FL™ E-40FL™ U-09LV™	E-05CL™ E-440FL™
Thermo- plastics	U-05FL™ E-40FL™ E-20HP™	U-05FL™ U-09LV™ E-40FL™	U-05FL™ U-09LV™ E-40FL™	U-05FL™ E-40FL™ U-09LV™	U-05FL™ U-09LV™ E-40FL™	U-05FL™ U-09LV™ E-40FL™	E-40FL™ E-05CL™ E-20HP™	E-05CL™ E-40FL™ E-20HP™	U-05FL™ U-09LV™ E-40FL™	E-05CL™ E-40FL™ E-20HP™ 9433™
Thermoset Plastics	E-20HP™ E-20NS™ E-120HP™	U-05FL™ U-09LV™ E-40FL™	E-20HP™ E-120HP™ E-214HP™	U-05FL™ E-20HP™ E-40FL™	E-30CL™ U-05FL™ 0151™	E-30CL™ E-20HP™ E-40FL™ 9433™	E-20HP™ E-120HP™ 9432NA™	E-20HP™ E-40FL™	E-05CL™ U-09LV™ E-40FL™	E-40FL™ U-05FL™
Rubber	U-05FL™ E-40FL™ U-09LV™	U-05FL™ U-09LV™ E-40FL™	U-05FL™ E-40FL™ E-20HP™ 9433™	E-40FL™ U-05FL™	U-05FL™ E-40FL™ U-09LV™	U-05FL™ E-40FL™ U-09LV™	E-40FL™ E-05CL™	E-40FL™ E-05CL™ E-20HP™ 9433™	U-05FL™ U-09LV™ E-40FL™	E-40FL™ E-05CL™ U-09LV™
Glass	E-20NS™ E-30CL™ U-05FL™ 0151™	U-05FL™ U-09LV™ E-40FL™	E-30CL™ U-05FL™	E-05CL™ U-05FL™ U-09LV™	E-30CL™ U-09LV™	E-30CL™ E-20NS™ U-05FL™ 0151™	E-30CL™ E-20HP™ 0151™	E-30CL™ E-40FL™	E-40FL™ E-05CL™ U-09LV™	E-05CL™ E-40FL™ E-30CL™
Ceramic	E-20NS™ E-30CL™ E-20HP™	U-05FL™ U-09LV™ E-40FL™	E-40FL™ E-20HP™ E-30CL™ 9433™	U-05FL™ U-09LV™ E-40FL™	E-30CL™ U-09LV™	E-20HP™ E-30CL™ E-120HP™ 9433™	E-20HP™ E-20NS™	E-20HP™ E-40FL™ E-00NS™	E-40FL™ E-05CL™ U-09LV™	E-40FL™ E-05CL™
Masonry	E-20NS™ E-20HP™ E-120HP™ 9433™	E-40FL™ E-20HP™ E-05CL™ 9433™	E-20HP™ E-120HP™	E-40FL™ E-05CL™	E-30CL™ E-20HP™ 0151™	E-20HP™ E-20NS™ 9433™	E-20HP™ E-120HP™	E-20HP™ E-40FL™ 9433™	E-05CL™ E-40FL™ U-05FL™	E-05CL™ E-20HP™
Wood	E-20HP™ E-40FL™ 9433™	E-40FL™ E-05CL™ E-20HP™	E-20HP™ E-40FL™	E-40FL™ E-05CL™ E-20HP™ 9433™	E-30CL™ E-40FL™ 0151™	E-20HP™ E-40FL™	E-20HP™ E-40FL™	E-20HP™ E-40FL™ 9433™	E-05CL™ E-40FL™	E-40FL™ U-05FL™
Leather	E-40FL™ U-05FL™ U-09LV™	U-05FL™ U-09LV™ E-40FL™	E-05CL™ U-09LV™ E-40FL™	U-05FL™ U-09LV™ E-40FL™	E-40FL™ E-05CL™ U-09LV™	E-40FL™ E-05CL™ U-09LV™ 960™	E-05CL™ E-40FL™ U-05FL™	E-05CL™ E-40FL™	U-05FL™ U-09LV™ E-40FL™	E-05CL™ E-40FL™ U-05FL™
Paper/ Hardboard	E-40FL™ E-05CL™ E-00CL™	E-40FL™ E-05CL™ E-20HP™ 9433™	E-40FL™ E-05FL™ U-05FL™	E-40FL™ E-05CL™ U-09LV™	E-05CL™ E-40FL™ E-30CL™ 0151™	E-40FL™ E-05CL™	E-05CL™ E-20HP™	E-20HP™ E-40FL™	E-05CL™ E-40FL™ U-05FL™	E-05CL™ E-40FL™

Thermoplastics: ABS, PC, Acrylic, Nylon, SAN, PVC
 Thermoset Plastics: Epoxy, Phenolic, Polyester, DAP
 Rubber: Butyl, Neoprene, Nitrile, SBR, Natural, EPDM


Loctite® Hysol® Epoxy Adhesives Properties Chart

PRODUCT	Item Number	Container	FEATURES	COLOR	VISCOSITY AT 25°C	WORKLIFE	MIX RATIO BY VOLUME (RESIN:HARDENER)	PEEL STRENGTH (PIW)	OVERLAP SHEAR STRENGTH* (PSI)	Tg °C	HARDNESS (SHORE D)	AGENCY APPROVALS
FAST SETTING	E-05CL™ Hysol®	29299 50 ml dual cartridge 29300 200 ml dual cartridge 29301 400 ml dual cartridge 29302** 5 gallon pail, resin 29303** 5 gallon pail, hardener	Toughened, high peel, low odor	Ultra Clear	Resin – 1,900 cP Hardener – 2,800 cP	3 to 5 min.	1:1	5-30	2,000 to 4,000	10	55	CFIA
HIGH PERFORMANCE	E-20HP™ Hysol®	29314 50 ml dual cartridge 29315 200 ml dual cartridge 29316 400 ml dual cartridge 29317** 5 gallon pail, resin 29318** 5 gallon pail, hardener	High strength, rubber toughened, high peel, high shear, fast setting	Off White	Resin – 65,000 cP Hardener – 7,000 cP	20 min.	2:1	20-70	3,000 to 5,000	60	80	CFIA
	E-40FL™ Hysol®	29304 50 ml dual cartridge 29305 200 ml dual cartridge 29306 400 ml dual cartridge	Toughened, flexible, impact resistant	Grey	Resin – 75,000 cP Hardener – 65,500 cP	40 min.	1:1	5-40	1,000 to 3,000	30	75	CFIA
	E-60HP™ Hysol®	29319 50 ml dual cartridge 29320** 200 ml dual cartridge 29321 400 ml dual cartridge 29322** 5 gallon pail, resin 29323** 5 gallon pail, hardener	High strength, toughened, high peel, high shear	Off White	Resin – 67,500 cP Hardener – 7,000 cP	60 min.	2:1	20-70	3,000 to 5,000	70	80	CFIA
	E-120HP™ Hysol®	29353 50 ml dual cartridge 29354 200 ml dual cartridge 29355 400 ml dual cartridge 29356** 5 gallon pail, resin 29357** 5 gallon pail, hardener	Ultra strength, non-sag, aerospace grade	Amber	Resin – 41,500 cP Hardener – 2,800 cP	120 min.	2:1	20-50	3,000 to 6,000	90	85	CFIA
	9433™ Hysol®	83119 50 ml dual cartridge	Self-leveling, high strength, high peel	Cream	Resin – 174,000 cP Hardener – 115,000 cP	30 min.	2:1	45†	3,800	N/A	75	N/A
	9460™ Hysol®	83129 50 ml cartridge 83128 200 ml cartridge 83127** 400 ml cartridge 83131 5 lb. kit 83130 20 lb. kit 83133 50 lb. pail, hardener 83134 50 lb. pail, resin	High peel, impact resistant, high viscosity, non-sag	Grey	Resin – 225,000 cP Hardener – 175,000 cP	40 min.	1:1	35†	3,200	N/A	80	N/A
	9460PB™ Hysol®	83233 5 lb. kit 83232 20 lb. kit 83230** 50 lb. pail, resin 83231** 50 lb. pail, hardener	Bonds printing blanket stock, high strength	Grey	Resin – 225,000 cP Hardener – 100,000 cP	100 min.	1:1	N/A	2,000	N/A	N/A	N/A

* Tested on aluminum lap shears.
** Made-to-order item.

† Formerly Dexter® Hysol® 609.
‡ ASTM D3167.

EPK = Epoxi-Patch® Kit.

 Indicates TOP CHOICE products.

Loctite® Hysol® Epoxy Adhesives Properties Chart

PRODUCT	Item Number	Container	FEATURES	COLOR	VISCOSITY AT 25°C	WORKLIFE	MIX RATIO BY VOLUME (RESIN:HARDENER)	PEEL STRENGTH (PIW)	OVERLAP SHEAR STRENGTH* (PSI)	Tg °C	HARDNESS (SHORE D)	AGENCY APPROVALS	
GENERAL PURPOSE	0151™ Hysol®	83069 83176 83179 83178 83181** 83180**	50 ml dual cartridge EPK 3.3 oz. kit 2.6 lb. kit 10.7 lb. kit 40 lb. pail, resin 6.8 lb. can, hardener	General purpose, ultra clear, extended work life	Clear	Resin – 70,000 cP Hardener – 60,000 cP	50 min.	2.7:1	N/A	1,850	58	85	CFIA
	1C™ Hysol®	83200 83202 83201 83206** 83183**	EPK 4 oz. kit 4 lb. kit 17 lb. kit 60 lb. pail, resin 43 lb. pail, hardener	General purpose, gap filling, high temperature	White	Resin – 235,000 cP Hardener – 710,000 cP	20 min.	2.5:1	N/A	1,750	98	80	CFIA
	1C-LV™ Hysol®	83208 83207	50 ml dual cartridge 200 ml dual cartridge	General purpose, gap filling, impact resistant	Light Tan	Resin – 82,000 cP Hardener – 36,200 cP	20 min.	2:1	N/A	2,100	N/A	75	N/A

Loctite® Hysol® Epoxy & Urethane Adhesives

HIGH TEMP	9739™ Hysol®	83149** 83150**	42 lb. pail, hardener 3x56 lb. pail, resin	High temperature resistance, high chemical resistance	Black	Resin – 1,400,000 cP Hardener – 2,250,000 cP	90 min.	3.3:1	N/A	2,500	N/A	N/A	N/A
ADHESION SPECIFIC	E-20NS™ Hysol®	29334 29335 29336	50 ml dual cartridge 200 ml dual cartridge 400 ml dual cartridge	Metal bonder, non-sag, high peel, high shear	Light Tan	Resin – 60,000 cP Hardener – 30,000 cP	20 min.	2:1	5-30	2,000 to 4,000	87	90	CFIA
	E-30CL™ Hysol®	29329 29330 29331	50 ml dual cartridge 200 ml dual cartridge 400 ml dual cartridge	Glass bonder, low viscosity, impact resistant	Ultra Clear	Resin – 10,500 cP Hardener – 2,200 cP	30 min.	2:1	5-30	2,000 to 4,000	70	85	CFIA
POTTING	E-60NC™ Hysol®	29324 29325 29326	50 ml dual cartridge 200 ml dual cartridge 400 ml dual cartridge	Potting††, electrically non-corrosive, low viscosity	Black Opaque	Resin – 6,200 cP Hardener – 13,000 cP	60 min.	1:1	1-5	1,000 to 3,000	55	85	CFIA
ONE COMPONENT	E-214HP™ Hysol®	29339 29340	30 ml cartridge 300 ml cartridge	High strength, temperature resistant, non-sag	Grey	150,000 cP	Heat cure	1 part	30-70	3,000 to 6,000	120	85	N/A
	3985™ Hysol®	40870 34731**	1 liter bottle 5 gallon pail	Non-sag, armature bonding	Black	47,500 cP	10 min. at 121°C	1 part	N/A	N/A	N/A	N/A	N/A
	9459™ Hysol®	83126	10 lb. can	High temperature resistance, self-leveling, high chemical resistance	White	39,000 cP	6 min.	1 part	N/A	3,000	N/A	N/A	N/A
POLYURETHANES	U-05FL™ Hysol®	29348 29349 29350	50 ml dual cartridge 200 ml dual cartridge 400 ml dual cartridge	Metal bonder, highly flexible, high strength	Off White	Resin – 640 cP Hardener – 35,000 cP	5 min.	1:2	5-30‡	1,000 to 3,000	48	45	CFIA
	U-09FL™ Hysol®	29460 29461** 29462** 29370** 29371**	50 ml dual cartridge 200 ml dual cartridge 400 ml dual cartridge 45 gallon pail, resin 5 gallon pail, hardener	Plastic bonder, highly flexible, high peel	Ultra Clear	Resin – 10,000 cP Hardener – 1,150 cP	10 min.	1:1	5-30‡	500 to 2,000	-20	45	N/A
	U-09LV™ Hysol®	38588 38589 38590** 38591**	50 ml dual cartridge 200 ml dual cartridge 45 gallon pail, resin 5 gallon pail, hardener	Plastic bonder, highly flexible, high peel, low viscosity	Ultra Clear	Resin – 920 cP Hardener – 1,030 cP	10 min.	1:1	N/A‡	500 to 2,000	N/A	45	N/A

* Tested on aluminum lap shears.
EPK = Epoxi-Patch® Kit.

** Made-to-order item.
‡ Varies with substrates.

†† For additional potting and encapsulating products, refer to page 40.

† ASTM D3167.

✓ Indicates TOP CHOICE products.