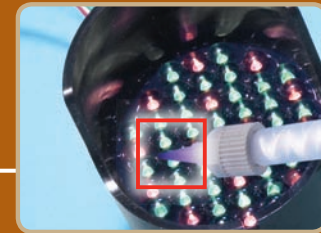
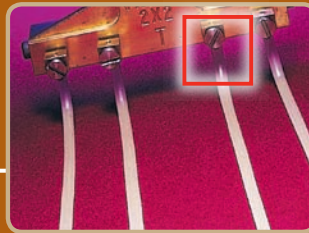


Your Source for  
**POTTING & ENCAPSULATING**



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Potting and encapsulating compounds are used to provide mechanical reinforcement to housed assemblies, to fill large voids and to protect components from the effects of exposure to chemicals, moisture, mechanical shock and vibration. Sealing components with potting and encapsulating compounds prevents corrosion and ensures long-term integrity of the device.

**VARIABLES TO CONSIDER WHEN SELECTING A POTTING OR ENCAPSULATING MATERIAL INCLUDE:**

- Viscosity of uncured compound
- Dispensing requirements
- Device operating temperature
- Desired chemical resistance
- Desired thermal conductivity
- Desired flame retardance
- Hardness of cured product
- Overall cost

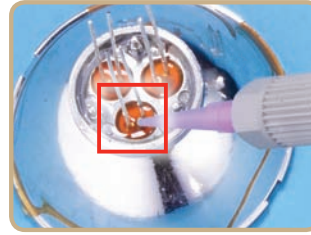
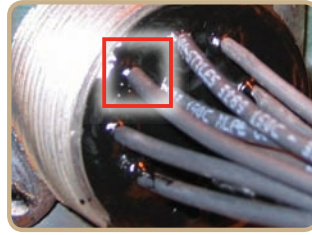
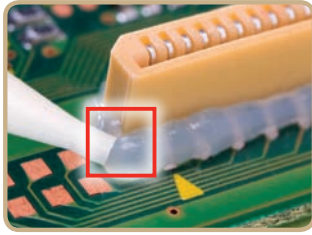
There are a variety of potting and encapsulating compounds to choose from – epoxy, hot melt, silicone, and urethane. The thermal properties of epoxy and silicone systems make them ideally suited for applications exposed to temperatures above 257°F (125°C). If a soft, flexible material is needed, particularly at low temperatures, then a urethane, silicone or hot melt material may be used.

**WHAT IS THE BEST PRODUCT FOR MY APPLICATION?**

The following chart will work best when selecting a potting or encapsulating compound. This chart is intended to serve as a general guideline to help you determine which categories are best suited for your application. The data presented represents typical properties for each product category; however, individual product properties may differ. It is suggested that, based on the information provided, you consider at least the two best product categories that meet your application criteria. Individual product information can then be found on the pages that follow to help you narrow your search.

Loctite® Adhesives and Sealants Product Specialists are available to assist you with new product designs, or to help you re-engineer an existing application for improved performance and cost savings. They can also set up testing of your parts at the Henkel Customer Engineering Center. For application assistance, call **1-800-LOCTITE (562-8483)**; within Canada, call **1-800-263-5043**; or, contact us through the web at [www.henkelna.com/loctite](http://www.henkelna.com/loctite).

**STRAIGHT FROM *The Source***



## Your Source POTTING & ENCAPSULATING SELECTOR GUIDE

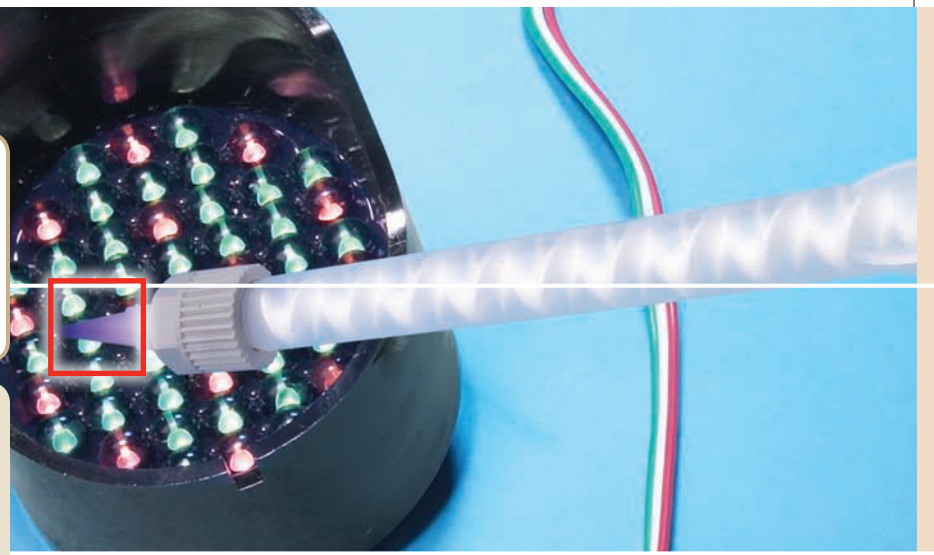
PERFORMANCE CONSIDERATIONS	POTTING & ENCAPSULATING COMPOUNDS			
	HOT MELTS	POLYURETHANES	EPOXIES	SILICONES
<b>BENEFITS</b>	Fast, large gap filling	Excellent toughness/flexibility	Wide range of formulations	Excellent temperature resistance
<b>LIMITATIONS</b>	Low heat resistance	Liquid adhesive sensitive to moisture	Mixing required	Low strength
<b>TEMPERATURE RESISTANCE</b>	-85°F to 257°F (-65°C to 125°C)	-85°F to 257°F (-65°C to 125°C)	-85°F to 356°F (-65°C to 180°C)	-85°F to 392°F (-65°C to 200°C)
<b>FLUID RESISTANCE</b>				
<b>POLAR SOLVENTS<sup>1</sup></b>	Good (Polyolefins, Polyamides)	Good	Very Good	Good
<b>NON-POLAR SOLVENTS<sup>2</sup></b>	Good (Polyamides)	Good	Excellent	Poor
<b>HARDNESS</b>	Semisoft	Soft	Rigid	Soft
<b>FLEXIBILITY</b>	High	High	Low	Very High
<b>GLASS TRANSITION TEMPERATURE (TG)</b>	Low	Low	High	Very Low
PERFORMANCE CONSIDERATIONS	POTTING & ENCAPSULATING COMPOUNDS			
	HOT MELTS	POLYURETHANES	EPOXIES	SILICONES
<b>NUMBER OF COMPONENTS</b>	1	2	2	1
<b>CURE TEMPERATURE</b>	Room Temperature (applied at elevated temperature)	Room Temperature	Room Temperature	UV/Room Temperature
<b>GEL TIME</b>				
<b>AVERAGE</b>	60 seconds	1 to 3 hours	1 to 3 hours	30 seconds
<b>FASTEST</b>	10 to 20 seconds	15 minutes	15 minutes	5 seconds
<b>FULL CURE TIME</b>	1 hour (or when cooled)	24 hours	24 hours	24 hours
<b>DEPTH OF CURE</b>	Unlimited	Unlimited	Unlimited	Shallow (<1.5 in.)
<b>DISPENSING/CURING EQUIPMENT REQUIRED?</b>	Yes	Yes	Yes	Yes
<b>LIGHT CURE VERSIONS AVAILABLE?</b>	No	No	Yes	Yes

<sup>1</sup> Examples of Polar Solvents: Water, Ethylene Glycol, Isopropyl Alcohol, Acetone.

<sup>2</sup> Examples of Non-Polar Solvents: Motor Oil, Gasoline, Toluene, n-Heptane, ATF.

**PLEASE NOTE:** This chart should not be used to specify products without specific testing. It is recommended that you conduct on-part testing to ensure product performance before specifying any adhesives.

Your Source for  
**POTTING & ENCAPSULATING  
EPOXIES &  
POLYURETHANES**



- Provides tough, long-lasting anti-skid surfaces for added safety
- Can be easily applied using Loctite® phenolic or bristle rollers to concrete, metal or wood surfaces
- Stands up to heavy traffic and harsh environments
- For maximum adhesion, use Loctite® Big Foot® primers

[ Epoxies & Polyurethanes ]

Loctite® Hysol® potting and encapsulating compounds are two-part epoxy and polyurethane systems formulated to offer a wide range of performance characteristics matched to specific application requirements. Any epoxy resin can be combined with any epoxy hardener to create a mixed system. The same applies to the polyurethane resins and hardeners.

[ Loctite® Hysol® Epoxies Product Chart ]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	PACKAGE WEIGHT	KEY FEATURES
LOCTITE® HYSOL® EPOXIES RESINS	3140™ 39944 39945*	1 gallon pail 5 gallon pail	12 lbs. 65 lb.	General-Purpose
	3141™ 39947 39948*	1 gallon pail 5 gallon pail	12 lbs. 63 lbs.	High Temperature
	3142™ 39950	1 gallon pail	16 lbs.	Thermally Conductive
	3145™ 40512 40511*	1 gallon pail 5 gallon pail	13 lbs. 65 lbs.	Flame Retardant
LOCTITE® HYSOL® EPOXIES HARDENERS	3160™ 39958*	5 gallon pail	40 lbs.	Glossy Surface Finish
	3162™ 39960 39962*	1 quart can 5 gallon pail	1.8 lbs. 36 lbs.	Fast Cure
	3163™ 39964 39966*	1 quart can 5 gallon pail	1.7 lbs. 38 lbs.	Excellent Adhesion
	3164™ 39969 39970*	1 gallon pail 5 gallon pail	7 lbs. 40 lbs.	General-Purpose
	3165™ 39395 39974*	1 quart can 5 gallon pail	1.7 lbs. 35 lbs.	Low Shrinkage

[ Loctite® Hysol® Epoxy Kits Properties Chart ]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	COLOR	WORK LIFE	HARDNESS (SHORE)	AGENCY APPROVALS	KEY FEATURES
LOCTITE® HYSOL® EPOXY KITS E-60NC™	29324	50 ml dual cartridge	Black	60 min.	85	CFIA	Electrically noncorrosive, low viscosity
	29325	200 ml dual cartridge					
	29326	400 ml dual cartridge					
LOCTITE® HYSOL® EPOXY KITS E-30CL™	29329	50 ml dual cartridge	Clear	30 min.	85	N/A	Medium fixture, chemical resistant
	29330	200 ml dual cartridge					
	29331	400 ml dual cartridge					

[ Loctite® Hysol® Polyurethanes Product Chart ]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	PACKAGE WEIGHT	KEY FEATURES
LOCTITE® HYSOL® POLYURETHANES RESINS	3173™ 39984 39985 39986*	1 quart can 1 gallon pail 5 gallon pail	2.5 lbs. 10 lbs. 50 lbs.	General-Purpose
	3182™ 39995 39996* 39997*	1 gallon pail 5 gallon pail 55 gallon pail	12 lbs. 62 lbs. 625 lbs.	Fast Cure
LOCTITE® HYSOL® POLYURETHANES HARDENERS	3183™ 39998 39999*	1 gallon pail 5 gallon pail	7.5 lbs. 37 lbs.	General-Purpose
	3184™ 39398 39397*	1 gallon pail 5 gallon pail	12 lbs. 625 lbs.	Flame Retardant

**LOCTITE® DURAPUMP™  
METER MIX SYSTEMS**

Loctite® DuraPump™ Meter Mix Systems offer superior operating performance and durability for a wide range of two-component adhesive chemistries (including MMA\*\*) up to 10:1 ratios and is available in two different models – programmable and pneumatic. For more product and technical information and other Loctite® Meter Mix systems, please go to [page 183](#).



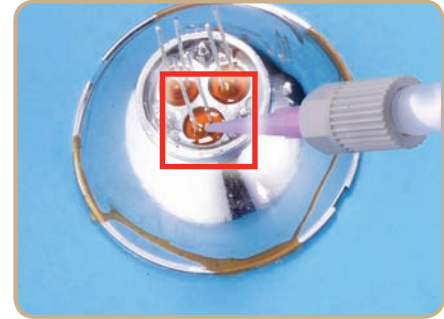
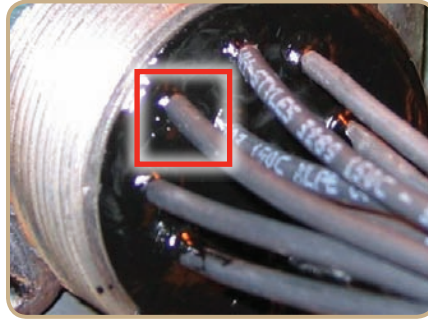
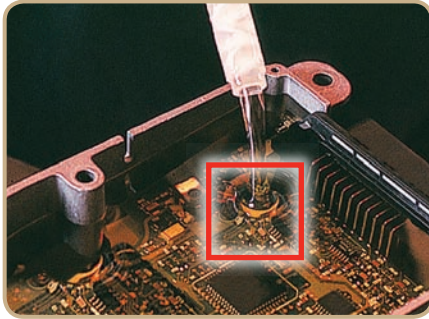
ADDITIONAL  
RESOURCES

[ Loctite® Hysol® Polyurethanes Kits Properties Chart ]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	COLOR	WORK LIFE	HARDNESS (SHORE)	AGENCY APPROVALS	KEY FEATURES
LOCTITE® HYSOL® POLYURETHANES KITS NEW	3364™ 1166733	50 ml dual cartridge	Black	45 sec.	85	UL 94V-0	Fast cure, 1:1 mix ratio, black

\* Made-to-order items. \*\* Pneumatic only

## Sources REVEALED



### [ Applications ]

- Electronic Connectors and Assemblies
- Controls
- Lighting
- LED
- Power
- Solar
- Signs and Displays
- Wire and Cable

APPLICATIONS

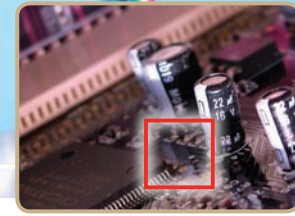
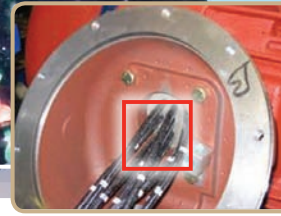
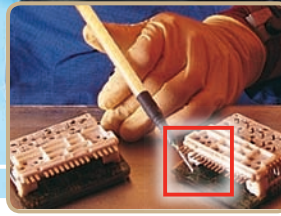
POTTING & ENCAPSULATING

Epoxies & Polyurethanes

### [ Loctite® Hysol® Polyurethane Systems Properties Chart ]

SYSTEM CHARACTERISTICS			LOCTITE® HYSOL® POLYURETHANE SYSTEMS		
			3173™/3182™	3173™/3183™	3173™/3184™
TYPICAL UNCURED PROPERTIES	VISCOSITY (cP)	Resin	75	75	75
		Hardener	30,000	800	14,000
		Mixed	5,500	450	2,250
	WORKING TIME	At 73°F (23°C)	<7 minutes @ 300 g	20 to 40 minutes @ 105 g	150 minutes @ 300 g
	GEL TIME	At 73°F (23°C)	14 minutes @ 300 g	40 to 70 minutes @ 105 g	150 minutes @ 300 g
	CURE CYCLE	Normal 73°F (23°C)	90 minutes	24 hours	24 hours
		Alternate 185°F (85°C)	30 minutes	1 to 3 hours	1 to 3 hours
	MIX RATIO	By Weight (Resin : Hardener)	13:87	30:70	15:85
		By Volume (Resin : Hardener)	1:5.2	1:3	1:4.8
	COLOR	Resin	Dark Brown	Clear Brown	Clear Brown
Hardener		Black	Opaque Black	Opaque White	
Mixed		Black	Opaque Black	Opaque White	
SPECIFIC GRAVITY	Resin	1.23	1.23	1.23	
	Hardener	1.60	0.96	1.45	
	Mixed	1.55	1.06	1.40	
TYPICAL CURED PROPERTIES	HARDNESS, SHORE A		75	70	80
	HARDNESS, SHORE 00		N/A	N/A	N/A
	GLASS TRANSITION TEMPERATURE/Tg (°C)		-10	-16	-15
	CTE ABOVE Tg (M/MM°C)		128x10e-6	190x10e-6	151x10e-6
TYPICAL CURED PROPERTIES	DIELECTRIC CONSTANT	0.1 kHz	4.68	5.92	4.51
		1.0 kHz	4.02	4.36	4.29
		10.0 kHz	3.76	3.65	3.94
		100.0 kHz	3.63	3.31	3.56
	DISSIPATION FACTOR	0.1 kHz	0.13	0.22	0.02
		1.00 kHz	0.07	0.17	0.04
		10.0 kHz	0.04	0.10	0.06
		100.0 kHz	0.02	0.05	0.07
	INSULATION RESISTANCE (OHMS)		2.5x10e+13	1.1x10e+11	1.1x10e+12
	VOLUME RESISTIVITY (OHMS/CM)		1.5x10e+15	6.83x10e+12	6.61x10e+13
DIELECTRIC STRENGTH (VOLTS/MIL)		370	375	370	
FLAMMABILITY RATING		N/A	N/A	94V-0 @ 3/8 in.	
UL FILE NO. E257711		N/A	N/A	94V-2 @ 1/4 in.	

Your Source for  
**POTTING & ENCAPSULATING  
EPOXIES &  
POLYURETHANES**

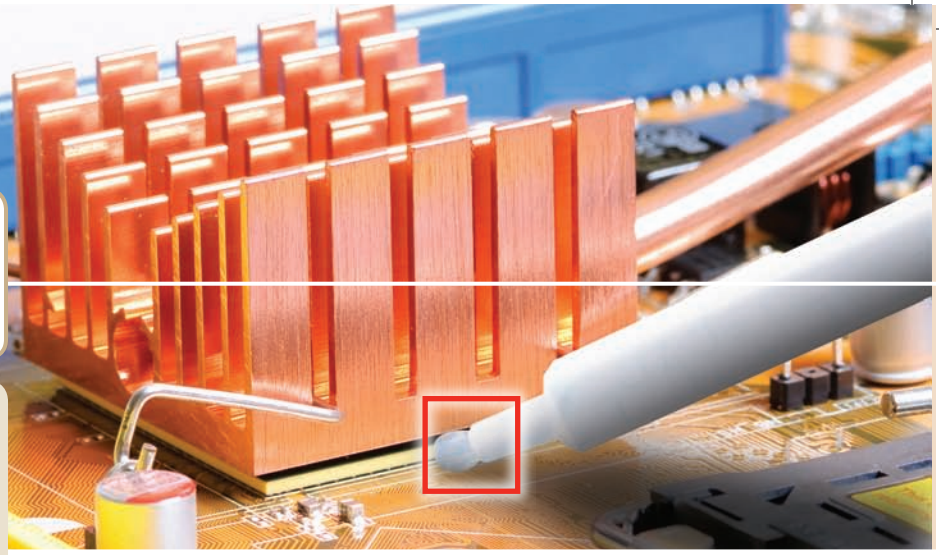


SYSTEM CHARACTERISTICS			LOCTITE® 3140™ HYSOL® EPOXY SYSTEM					LOCTITE® 3141™ HYSOL® EPOXY SYSTEM				
			3140™/3160™	3140™/3162™	3140™/3163™	3140™/3164™	3140™/3165™	3141™/3160™	3141™/3162™	3141™/3163™	3141™/3164™	3141™/3165™
TYPICAL UNCURED PROPERTIES	VISCOSITY (cP)	Resin	11,000	11,000	11,000	11,000	11,000	80,000	80,000	80,000	80,000	80,000
		Hardener	180	120	450	105	55	180	120	450	105	55
		Mixed	1,700	2,000	1,500	1,500	2,000	7,000	5,000	4,000	6,000	13,000
	WORKING TIME	73°F (25°C)	80 to 100 min. @ 200 g	5 to 10 min. @ 100 g	80 to 100 min. @ 200 g	10 to 15 min. @ 400 g	to 1.5 hrs. @ 400 g	1.5 to 2 hrs. @ 400 g	5 min. @ 200 g	30 to 45 min. @ 200 g	10 min. @ 400 g	35 to 40 min. @ 200 g
	GEL TIME	73°F (25°C)	2.5 to 3 hrs. @ 200 g	10 to 15 min. @ 105 g	2.5 to 3 hrs. @ 200 g	25 to 35 min. @ 400 g	2 to 3 hrs. @ 400 g	2.5 to 3.5 hrs. @ 400 g	10 to 15 min. @ 200 g	60 to 80 min. @ 200 g	20 to 25 min. @ 200 g	65 to 75 min. @ 200 g
	CURE CYCLE	Normal 73°F (25°C)	24 hrs.	16 hrs.	24 hrs.	16 hrs.	24 hrs. @ 77°F + 4 hrs. @ 200°F	24 hrs.	24 hrs.	24 hrs.	24 hrs.	24 hrs. @ 77°F + 4 hrs. @ 200°F
		Alternate 150°F (60°C)	2 hrs.	1 hr.	2 hrs.	2 hrs.	N/A	4 hrs.	2 hrs.	2 hrs.	2 hrs.	N/A
	MIX RATIO	By Weight (R:H)	100:20	100:18.1	100:29	100:29.5	100:9	4:1	100:19.8	100:30	100:31.5	100:9
		By Volume (R:H)	3.1:1	3.6:1	2:1	2:1	.5:1	2.5:1	3:1	2:1	2:1	6.5:1
	COLOR	Resin	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
Hardener		Clear	Clear	Clear	Clear	Clear	Clear	Clear	Amber	Amber	Clear	
Mixed		Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	
SPECIFIC GRAVITY	Resin	1.64	1.64	1.64	1.64	1.64	1.61	1.61	1.61	1.61	1.61	
	Hardener	1.00	0.99	0.96	0.97	0.96	1.00	0.99	0.96	0.97	0.96	
	Mixed	1.48	1.48	1.41	1.42	0.96	1.44	1.46	1.40	1.40	1.40	
TYPICAL CURED PROPERTIES	HARDNESS, SHORE D		80	80	80	70	85	85	90	80	85	85
	GLASS TRANSITION TEMPERATURE/Tg (°C)		27	35	20	27	67	43	75	38	31	104
	CTE ABOVE Tg (MM/MM°C)		130x10e-6	125x10e-6	133x10e-6	150x10e-6	119x10e-6	160x10e-6	135x10e-6	138x10e-6	111x10e-6	115x10e-5
	CTE BELOW Tg (MM/MM°C)		44x10e-6	37.5x10e-6	44.9x10e-6	82.6x10e-6	36.0x10e-6	60.7x10e-6	39.7x10e-6	52.6x10e-6	49.2x10e-6	35x10e-6
	DIELECTRIC CONSTANT	0.1 kHz	4.43	4.25	4.61	4.2	4.87	4.30	3.91	3.58	4.11	4.28
		1.0 kHz	4.37	4.20	4.37	4	4.83	4.22	3.88	3.52	3.97	4.18
		10.0 kHz	4.31	4.16	4.20	3.8	4.75	4.14	3.84	3.46	3.87	4.06
		100.0 kHz	4.24	4.10	4.05	3.7	4.64	4.03	3.79	3.39	3.77	3.92
	DISSIPATION FACTOR	0.1 kHz	0.008	0.010	0.040	0.08	0.003	0.01	0.01	0.01	0.02	0.01
		1.0 kHz	0.008	0.011	0.027	0.04	0.007	0.01	0.01	0.01	0.02	0.02
10.0 kHz		0.010	0.012	0.026	0.03	0.011	0.02	0.01	0.01	0.02	0.02	
100.0 kHz		0.014	0.013	0.023	0.03	0.014	0.02	0.01	0.02	0.02	0.02	
INSULATION RESISTANCE (OHMS)		1.14x10e+13	2.67x10e+13	1.61x10e+12	7.5x10e+111	5.19x10e+13	5.72x10e+13	4.09x10e+13	1.23x10e+14	4.57x10e+13	2.15x10e+13	
VOLUME RESISTIVITY (OHMS/CM)		6.03x10e+14	2.53x10e+15	1.02x10e+14	1.5x10e+14	2.69x10e+15	4.03x10e+15	2.61x10e+15	7.41x10e+15	2.98x10e+15	1.37x10e+15	
DIELECTRIC STRENGTH (VOLTS/MIL)		365	385	365	410	355	375	355	385	395	365	
FLAMMABILITY RATING UL FILE NO. E257711		N/A	N/A	N/A	UL 94B @ 1/16 in.	N/A	N/A	N/A	N/A	N/A	N/A	
INSULATION SYSTEM UL FILE NO. E257711		N/A	N/A	N/A	UL 1446	N/A	N/A	N/A	N/A	N/A	N/A	

SYSTEM CHARACTERISTICS			LOCTITE® 3142™ HYSOL® EPOXY SYSTEM					LOCTITE® 3145™ HYSOL® EPOXY SYSTEM				
			3142™/3160™	3142™/3162™	3142™/3163™	3142™/3164™	3142™/3165™	3145™/3160™	3145™/3162™	3145™/3163™	3145™/3164™	3145™/3165™
TYPICAL UNCURED PROPERTIES	VISCOSITY (cP)	Resin	120,000 - 200,000	120,000 - 200,000	120,000 - 200,000	120,000 - 200,000	120,000 - 200,000	32,760	32,760	32,760	32,760	32,760
		Hardener	180	120	450	105	55	180	120	450	105	55
		Mixed	7,500	6,000	7,000	8,000	18,000	5,560	7,150	5,315	5,790	13,355
	WORKING TIME	77°F (25°C)	1.5 to 2 hrs. @ 400 g	5 to 10 min. @ 200 g	2 hrs. @ 400 g	25 min. @ 400 g	80 min. @ 400 g	2.5 to 4 hrs. @ 200 g	15 to 30 min. @ 200 g	3 to 3.5 hrs. @ 200 g	35 to 45 min. @ 200 g	2.5 to 3 hrs. @ 400 g
	GEL TIME	77°F (25°C)	3.5 to 4 hrs. @ 400 g	5 to 30 min. @ 200 g	>3 hrs. @ 400 g	50 min @ 400 g	2.5 hrs. @ 400 g	6 to 8 hrs. @ 200 g	35 to 45 min. @ 200 g	6 to 7 hrs @ 200 g	75 to 90 min. @ 200 g	5 hrs. @ 200 g
	CURE CYCLE	Normal 77°F (25°C)	24 hrs.	24 hrs.	48 hrs.	24 hrs.	24 hrs. @ 77°F +4 hrs. @ 200°F	24 hrs.	24 hrs.	24 hrs.	24 hrs.	24 hrs. @ 77°F + 4 hrs. @ 200°F
		Alternate 150°F (66°C)	4 hrs.	2 hrs.	4 hrs.	2 hrs.	4 hrs. @ + 200°F	2 hrs.	2 hrs.	4 hrs.	2 hrs.	4 hrs. @ + 200°F
	MIX RATIO	By Weight (R:H)	100:10.7	100:9	100:10.9	100:14.3	100:4.1	100:15	100:13	100:15.5	100:20	100:6
		By Volume (R:H)	3.8:1	4.5:1	3.6:1	2.8:1	9.7:1	4:1	4.5:1	3.7:1	2.9:1	9.7:1
	COLOR	Resin	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
		Hardener	Clear	Clear	Amber	Amber	Clear	Clear	Clear	Clear	Clear	Clear
		Mixed	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
SPECIFIC GRAVITY	Resin	2.40	2.40	2.40	2.40	2.40	1.67	1.67	1.67	1.67	1.67	
	Hardener	1.00	0.99	0.96	0.97	0.96	1.00	0.99	0.96	0.97	0.96	
	Mixed	1.54	1.54	1.53	1.50	1.62	1.51	1.54	1.49	1.49	1.58	
TYPICAL CURED PROPERTIES	HARDNESS, SHORE D		90	90	90	85	90	80	84	80	75	88
	GLASS TRANSITION TEMPERATURE/Tg (C°)		26	42	30	29	84	28	42	38	32	53
	CTE ABOVE Tg (MM/MM°C)		104x10e-6	97.2x10e-6	96.1x10e-6	106x10e-6	87.7x10e-6	1.22x10e-6	128x10e-6	130x10e-6	122x10e-6	111x10e-6
	CTE BELOW Tg (MM/MM°C)		29.2x10e-6	28.2x10e-6	33.5x10e-6	51.9x10e-6	26.9x10e-6	39.2x10e-6	42.6x10e-6	49.0x10e-6	59.4x10e-6	40.6x10e-6
	THERMAL CONDUCTIVITY	Watts/Meter°C	0.422	1.40	1.40	1.27	1.14	0.7935	0.8068	0.8119	0.7324	1.0341
	DIELECTRIC CONSTANT	0.1 kHz	5.77	4.87	5.28	5.51	5.65	4.08	3.81	4.27	4.19	4.43
		1.0 kHz	5.69	4.83	5.20	5.35	5.57	4.28	3.85	4.36	4.46	4.45
		10.0 kHz	5.62	4.78	5.12	5.21	5.46	4.15	3.74	4.11	4.22	4.28
		100.0 kHz	5.52	4.72	5.02	5.06	5.34	4	3.63	3.90	3.99	4.11
	DISSIPATION FACTOR	0.1 kHz	0.00	0.01	0.01	0.02	0.01	0.027	0.028	0.033	0.036	0.045
1.0 kHz		0.001	0.01	0.01	0.02	0.01	0.031	0.025	0.046	0.042	0.036	
10.0 kHz		0.01	0.01	0.01	0.02	0.01	0.025	0.021	0.037	0.037	0.027	
100.0 kHz		0.01	0.01	0.01	0.02	0.01	0.023	0.017	0.031	0.034	0.024	
INSULATION RESISTANCE (OHMS)		4.61x10e+13	5.31x10e+13	3.65x10e+13	2.75x10e+12	4.09x10e+13	N/A	N/A	N/A	N/A	N/A	
VOLUME RESISTIVITY (OHMS/CM)		3.00x10e+15	3.47x10e+15	2.55x10e+15	1.65x10e+14	2.61x10e+15	1.10e+14	8.4e+14	2.1e+14	2.5e+13	7.3e+14	
DIELECTRIC STRENGTH (VOLTS/MIL)		360	345	355	345	335	595	693	748	695	794	
FLAMMABILITY RATING UL FILE NO. E257711		N/A	N/A	N/A	N/A	N/A	N/A	UL 94V-0 @ 1/8 in.	N/A	N/A	UL 94V-0 @ 1/8 in.	

Your Source for  
**POTTING & ENCAPSULATING  
 SILICONES**

- Single-component, tough, protective
- Seals components against moisture, solvents and environmental conditions
- Cures in as little as 30 seconds to depths of 0.150 in. when exposed to UV light or visible light



[ Silicone Potting Compounds ]

**Loctite® 5031™ Nuva-Sil®  
 Silicone Potting Compound**

**HIGH ADHESION/VISIBLE LIGHT**

A low viscosity, self-leveling, UV or visible light curing silicone for high speed deep potting, coating and sealing applications. Provides high adhesion for difficult-to-bond substrates.

Item #	40086	300 ml cartridge
	40087	40 lb. pail

**Loctite® 5040™ RTV  
 Silicone Potting Compound**

A noncorrosive, self-leveling RTV silicone for shallow potting, sealing and coating of devices, especially for military and industrial applications.

Item #	40405	85 g tube
	40404	300 ml cartridge
	40407	40 lb. pail

**Loctite® 5055™ Silicone  
 Adhesive Sealant**

**SELF-LEVELING/FLOWABLE**

**NEW**

A UV or visible light curing, noncorrosive silicone for high speed coating, potting adhesion, or sealing applications. High adhesion for difficult-to-bond substrates.

Item #	1212167	25 ml syringe
	1214246	1 liter bottle
	1214247	15 liter pail*

**Loctite® 5056™ Silicone  
 Adhesive Sealant**

**SELF-LEVELING/  
 HIGH ADHESION**

**NEW**

A UV or visible light curing, noncorrosive silicone with very high bond strength. Ideal for high speed adhesion and sealing applications. High adhesion for difficult-to-bond substrates.

Item #	1214249	25 ml syringe
	1214250	1 liter bottle
	1214248	15 liter pail*

**Loctite® 5240™ Nuva-Sil®  
 Medical Device Sealant**

**SELF-LEVELING/  
 NONCORROSIVE**

**NEW**

A UV or visible light and moisture curing, noncorrosive silicone ideal for high speed adhesion and sealing applications. High adhesion for difficult-to-bond substrates.

Item #	1010341	30 ml syringe
	1010320	300 ml cartridge
	1010343	40 lb. pail

**Loctite® 5620™ Silicone  
 Potting Compound**

**ULTRA-CLEAR/FAST CURE**

**NEW**

Two-part, ultra-clear, fast cure, noncorrosive silicone. Transparent in color. Ideal for sealant, or potting applications that require a transparent silicone. Fast room temperature cure.

Item #	1257593	50 ml dual cartridge
	1257478	400 ml dual cartridge
	1257595	Part A - 40 lb. pail
	1257597	Part B - 40 lb. pail
	1257594	Part A - 400 lb. drum
	1257596	Part B - 400 lb. drum

**Loctite® 5623™ Silicone  
 Potting Compound**

**ULTRA-CLEAR/TACK-FREE**

**NEW**

Two-part, ultra-clear, tack-free, noncorrosive silicone gel. Transparent in color. Tough gel. Room temperature cure or accelerated heat cure.

Item #	1259300	400 ml dual cartridge
	1257611	Part A - 40 lb. pail
	1257607	Part B - 40 lb. pail
	1257612	Part A - 400 lb. drum
	1257609	Part B - 400 lb. drum

**Loctite® 5625™ Silicone  
 Potting Compound**

**ULTRA-CLEAR/SOFT GEL**

**NEW**

Two-part, ultra-clear, soft, noncorrosive silicone gel. Transparent in color. Very soft, re-enterable gel. Room temperature cure or accelerated heat cure.

Item #	1257475	400 ml dual cartridge
	1257616	Part A - 40 lb. pail
	1257613	Part B - 40 lb. pail
	1257617	Part A - 400 lb. drum
	1257615	Part B - 400 lb. drum

**Loctite® 5611F™/5611S™  
 Silicone Potting Compound**

**SELF LEVELING, NONCORROSIVE,  
 FLAME RETARDANT**

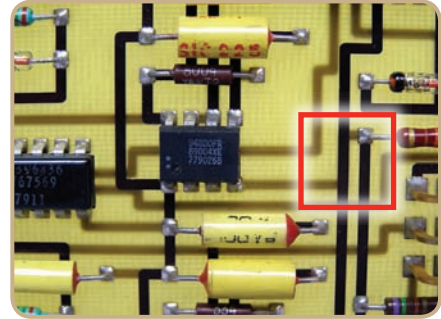
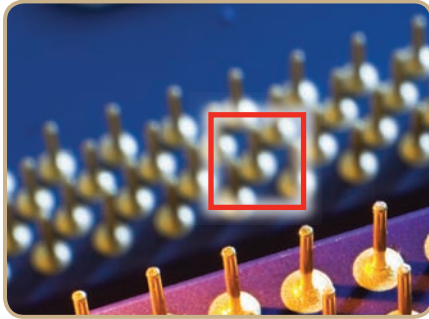
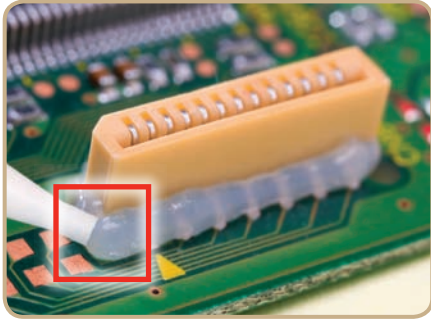
**NEW**

Two-part, flame retardant (UL94V-0) silicone. Products vary in cure speed and open times from fast (F) to standard (S) to match particular end-use applications. Grey in color.

Item #	1385991 - 5611F	490 ml dual cartridge
	1387908 - 5611 Part A	4.5 gallon pail
	1387706 - 5611F Part B	4.5 gallon pail
	1386373 - 5611 Part A	575 lb. drum
	1432213 - 5611F Part B	440 lb. drum
	1386378 - 5611S	490 ml dual cartridge
	1387908 - 5611 Part A	4.5 gallon pail
	1388496 - 5611S Part B	4.5 gallon pail
	1386373 - 5611 Part A	575 lb. drum
	1387212 - 5611S Part B	440 lb. drum

\* Made-to-order item.

Sources REVEALED



[ Loctite® Silicone Potting Compounds Properties Chart ]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	CURE SCHEDULE (Cure/Alt. Cure)	VISCOSITY (cP)	GEL TIME	HARDNESS	AGENCY APPROVALS
5031™ NUVA-SIL®	40086	300 ml cartridge	UV/visible light/moisture 60 seconds @ 40 mW/cm <sup>2</sup>	5,500	Seconds	34 Shore A	N/A
	40087	40 lb. pail					
5040™	40405	85 g tube	Moisture 24 hours @ 77°F (25°C)	35,000	<3 hours (skin over)	30 Shore A	MIL-A-46146B
	40404	300 ml cartridge					
	40407	40 lb. pail					
5055™ <b>NEW</b>	1212167	25 ml syringe	60 seconds @ 70 mW/cm <sup>2</sup>	525	Seconds	A 55	ISO 10993 Compliant
	1214246	1 liter bottle					
	1214247**	15 liter pail					
5056™ <b>NEW</b>	1214249	25 ml syringe	60 seconds @ 70 mW/cm <sup>2</sup>	2,200	Seconds	A 43	ISO 10993 Compliant
	1214250	1 liter bottle					
	1214248**	15 liter pail					
5091™ NUVA-SIL®	17412	300 ml cartridge	UV/moisture 60 seconds @ 40 mW/cm <sup>2</sup>	5,500	Seconds	34 Shore A	UL Classified for U.S.
	18074	40 lb. pail					
5240™ NUVA-SIL® <b>NEW</b>	1010341	30 ml syringe	60 seconds @ 70 mW/cm <sup>2</sup>	18,000	Seconds	A 45	ISO 10993 Compliant
	1010320	300 ml cartridge					
	1010343	40 lb. pail					
5611F™ <b>NEW</b>	1385991	490 ml dual cartridge	Two-Part 10:1 A:B by volume 11 minutes tack free	Part A - 5,000 Part B - 5,000	19 minutes	55 Shore A	UL 94V-0
	1387908 - Part A	4.5 gallon pail					
	1387706 - Part B	4.5 gallon pail					
	1386373 - Part A	575 lb. drum					
5611S™ <b>NEW</b>	1386378	490 ml dual cartridge	Two-Part 10:1 A:B by volume 38 minutes tack free	Part A - 5,000 Part B - 5,000	73 minutes	55 Shore A	UL 94V-0
	1387908 - Part A	4.5 gallon pail					
	1388496 - Part B	4.5 gallon pail					
	1386373 - Part A	575 lb. drum					
5620™ <b>NEW</b>	1257593	50 ml dual cartridge	Two-Part 30 minutes @ 77°F (25°C)	A: 220 B: 190 Mixed: 200	20 minutes*	35A	N/A
	1257478	400 ml dual cartridge					
	1257595	Part A - 40 lb. pail					
	1257597	Part B - 40 lb. pail					
	1257594	Part A - 400 lb. drum					
1257596	Part B - 400 lb. drum						
5623™ <b>NEW</b>	1259300	400 ml dual cartridge	Two-Part 1 hour @ 212°F (100°C) 24 hours @ 77°F (25°C)	A: 700 B: 700 Mixed: 700	120 minutes*	40 oo	N/A
	1257611	Part A - 40 lb. pail					
	1257607	Part B - 40 lb. pail					
	1257612	Part A - 400 lb. drum					
	1257609	Part B - 400 lb. drum					
5625™ <b>NEW</b>	1257475	400 ml dual cartridge	Two-Part 1 hour at @ 12°F (100°C) 24 hours @ 77°F (25°C)	A: 1,000 B: 2,000 Mixed: 1,500	100 minutes*	2 oo	N/A
	1257616	Part A - 40 lb. pail					
	1257613	Part B - 40 lb. pail					
	1257617	Part A - 400 lb. drum					
	1257615	Part B - 400 lb. drum					

ITEMS IN RED = Sources PICK





\* Pot Life \*\* Made-to-order item.



Your Source for  
**POTTING & ENCAPSULATING  
SILICONE EQUIPMENT**

**YOUR EQUIPMENT Source**

For more details, see the **Loctite® Equipment Sourcebook, LT-3669**, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).



LOCTITE® PRODUCT		ITEM NUMBER	PRESSURE REGULATION	USED TO DISPENSE	PACKAGE TYPE & SIZES	VISCOSITY RANGE	LOW LEVEL SENSING	CONSUMABLES – DISPENSE ACCESSORIES	
<b>PNEUMATIC CARTRIDGE DISPENSING</b>									
DISPENSE SYSTEMS		300 ML PNEUMATIC CARTRIDGE DISPENSING RETAINER	98319A	0 to 60 psi	Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones	300 ml cartridges	Low to Medium	Pneumatic	Cartridge Accessories – Page 185
		PNEUMATIC HANDHELD 300 ML DISPENSER	1294304	0 to 100 psi	Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Silicones	300 ml cartridges 250 ml tubes	Medium to High	No	
		300 ML CARTRIDGE PUSHER	98022	0 to 50 psi	Gel Cyanoacrylates, Anaerobic Gasketing, Light Cure/Acrylics, Low Viscosity Silicones	300 ml cartridges 250 ml tubes	Medium	Yes	
		HIGH PRESSURE 300 ML BENCHTOP CARTRIDGE DISPENSER	1046901	0 to 725 psi	Silicone, Polyurethane, MS Polymer Adhesives	300 ml cartridges	10,000 to 1,000,000	Yes	Use with High Pressure Dispense Valve (sold separately) – see below

LOCTITE® PRODUCT		ITEM NUMBER	TYPE	VISCOSITY RANGE	DISPENSE PATTERNS	USED TO DISPENSE	STROKE ADJUSTMENT	SUCK-BACK	CONSUMABLES – DISPENSE ACCESSORIES	
<b>HIGH VISCOSITY FLUID AND PASTE VALVES</b>										
VALVES & PUMPS		HIGH PRESSURE DISPENSE VALVE – 50 BAR	1049138	High Viscosity Fluid and Paste Valves	10,000 - 1,000,000 cP	Drop, Bead	Silicones, MS Polymers, Urethanes	Yes	Yes	Dispense Tips and Accessories – Pages 184-188
		HIGH PRESSURE DISPENSE VALVE – 150 BAR	1153502		500,000 - 2,000,000 cP			Yes	No	

**LOCTITE® BRANDED EQUIPMENT** – Loctite® is a full service supplier of equipment and offers a wide variety of equipment services to its customers. **For more Loctite® branded equipment, go to page 173.**  
Can't find what you're looking for? Visit [www.equipment.loctite.com](http://www.equipment.loctite.com) or call 1-800-LOCTITE (562-8483).

**STRAIGHT FROM The Source**

Your Source for  
**POTTING & ENCAPSULATING  
HOT MELTS**

- Well-suited for fast, deep potting applications requiring large gap fills in high speed manufacturing environments
- Used for potting and encapsulating in the electronics industry

[ Hot Melt Adhesives ]

**Loctite® 1942™ Hysol®  
Hot Melt Adhesive**

**GENERAL-PURPOSE**

Medium setting, general-purpose hot melt adhesive. Excellent adhesion to wood and many plastics. Not recommended for high temperature potting applications.

- Item # 83266 5 lb. sample bag pellets
- 83267 40 lb. carton pellets
- 83269 Maxistick™ 35 lb. carton
- 83271 PT™ stick 36 lb. carton
- 83272 Ministick™ 35 lb. carton
- 83273 5 oz. sample bag
- 83274 Superstick™ 10 in. 25 lb. bag
- 83275 Superstick™ 4 in. 25 lb. carton
- 83276 12 oz. sample bag
- 83277 Polyshot™ 35 lb. Carton

**Loctite® 7809FR™ Hysol®  
Hot Melt Adhesive**

**FIRE RETARDANT**

Modified with fire retardant materials. It has a UL 94V-0 flammability rating.

- Item # 83388 5 lb. sample bag pellets
- 83390 Superstick™ 13 oz. bag
- 83391 Polyshot™ 13 oz. bag
- 83675 Superstick™ 32 lb. carton
- 83676 Polyshot™ 25 lb. pail

**Loctite® 7811™ Hysol®  
Hot Melt Adhesive**

**HIGH TEMPERATURE**

A high performance polyamide with exceptional high temperature- and impact-resistance at low temperatures.

- Item # 83337 5 lb. sample bag pellets
- 83339 Polyshot™ (10 in.) 13 oz. sample bag
- 83340 Polyshot™ 25 lb. pail
- 83338 40 lb. carton

**Loctite® 7901™ Hysol®  
Hot Melt Adhesive**

**POLYAMIDE**

Low viscosity polyamide used extensively for potting and encapsulating.

- Item # 83343 Polyshot™ 13 oz. sample bag
- 83342 40 lb. carton pellets
- 83344 Polyshot™ 25 lb. pail

[ Loctite® Hysol® Hot Melt Adhesives Properties Chart ]

	LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	COLOR	VISCOSITY (cP) AT DISPENSE TEMPERATURE	TENSILE STRENGTH (psi)	OPEN TIME	TEMPERATURE RESISTANCE	% ELONGATION	HARDNESS (SHORE A)	AGENCY APPROVALS
LOCTITE® HYSOL® HOT MELT ADHESIVES	1942™ HYSOL®	83266	5 lb. sample bag pellets	Tan	5,000	250	30 seconds	142°F	500	N/A	FDA CFR175,105
		83267	40 lb. carton pellets								
		83269	Maxistick™ 35 lb. carton								
		83271	PT™ stick 36 lb. carton								
	7809FR™ HYSOL®	83390	Superstick™ 13 oz. bag	Amber	7,000	363	35 seconds	240°F	373	85	UL Classified for U.S.
		83391	Polyshot™ 13 oz. bag								
		83675	Superstick™ 32 lb. carton								
		83676	Polyshot™ 25 lb. pail								
	7811™ HYSOL®	83337	5 lb. sample bag pellets	Amber	6,400	400	35 seconds	266°F	1,200	N/A	N/A
		83339	Polyshot™ 13 oz. sample bag								
		83340	Polyshot™ 25 lb. pail								
		83338	40 lb. carton pellets								
	7901™ HYSOL®	83343	Polyshot™ 13 oz. sample bag	Amber	750	260	35 seconds	300°F	80	84	N/A
		83342	40 lb. carton pellets								
		83344	Polyshot™ 25 lb. pail								

You can find more Loctite® Hot Melt Adhesives in the bonding section on **pages 13-16**. Please see **pages 117-118** for Loctite® Hot Melts applicators and Bulk Hot Melt Systems.











ADDITIONAL RESOURCES

*Your Source for*  
**POTTING & ENCAPSULATING  
 HOT MELTS EQUIPMENT**

**YOUR EQUIPMENT Source**

For more details, see the **Loctite® Equipment Sourcebook, LT-3669**, or visit us on the web for additional information, diagrams, products and our full line of equipment at [www.equipment.loctite.com](http://www.equipment.loctite.com).

















LOCTITE® PRODUCT		ITEM NUMBER	STICK DIAMETER	DISPENSE MELT RATE	DISPENSE POWER	DISPENSE TEMPERATURE	HOT MELT CHEMISTRY	HOT MELT NOZZLES AND ACCESSORIES
<b>1/2-INCH SUPERSTICK™ DISPENSERS</b>								
	HYSOL™ 050A	916282	1/2 in. Superstick™ Sticks	4 lbs./hr.	Manual	383°F (195°C)	EVA/Polyolefin	Hot Melt Nozzles and Accessories – Page 118
	HYSOL™ 050-HT	98545	1/2 in. Superstick™ Sticks	4 lbs./hr.	Manual	419°F (215°C)	Polyamide	
	HYSOL™ 050-GAS	916268	1/2 in. Superstick™ Sticks	3 lbs./hr.	Manual	383°F (195°C)	EVA/Polyolefin	
	HYSOL™ 050-LITE	916281	1/2 in. Superstick™ Sticks	1.5 lbs./hr.	Manual	399°F (204°C)	EVA/Polyolefin	
<b>3/4-INCH MATCHSTICK™ DISPENSERS</b>								
	HYSOL™ 075	98033	3/4 in. Matchstick™ Sticks	9 lbs./hr.	Manual	182°C	EVA	Hot Melt Nozzles and Accessories – Page 118
	HYSOL™ 075-LT	98034	3/4 in. Matchstick™ Sticks	5 lbs./hr.	Manual	250°F (121°C)	CoolMelt™	
<b>1 3/4-INCH SPRAYPAC® &amp; POLYSHOT™ DISPENSERS</b>								
	HYSOL™ 175-AIR	98036	1 3/4 in. Polyshot™ Sticks	8 lbs./hr.	Electric	383°F (195°C)	EVA/Polyolefin	Hot Melt Nozzles and Accessories – Page 118
	HYSOL™ 175-AIR-HT	98040	1 3/4 in. Polyshot™ Sticks	8 lbs./hr.	Electric	419°F (215°C)	EVA/Polyolefin	
	HYSOL™ 175-SPRAY	98037	1 3/4 in. Polyshot™ Sticks	8 lbs./hr.	Electric	383°F (195°C)	EVA/Polyolefin	
	HYSOL™ 175-SPRAY-HT	98041	1 3/4 in. Polyshot™ Sticks	8 lbs./hr.	Electric	419°F (215°C)	Polyamide	
	HYSOL™ 175	98035	1 3/4 in. Polyshot™ Sticks	6.6 lbs./hr.	Manual	383°F (195°C) and 419°F (215°C)*	EVA/Polyolefin and Polyamide	
<b>URETHANE DISPENSER</b>								
	HYSOL™ REACTIVE URETHANE CARTRIDGE DISPENSER	98011	N/A	3 lbs./hr.	Air	250°F (121°C)	Reactive Urethane	Hot Melt Nozzles and Accessories – Page 118
<b>HOT MELT BENCH MOUNT &amp; CONTROLLER OPTIONS</b>								
	HOT MELT BENCH MOUNT KIT	98042	N/A	N/A	N/A	N/A	EVA/Polyamide	Hot Melt Nozzles and Accessories – Page 118
	HOT MELT PNEUMATIC TIMER	98043						

\* The Loctite® Hysol™ 175 Dispenser (manual electric) is supplied with both temperature modules.

\* If used with Bulk-34 System additional cable, Item Number 1053256 is also required and sold separately.

LOCTITE® PRODUCT	ITEM NUMBER	DESCRIPTION	USED WITH
	988107 (SINGLE PACK)	Adapter/Check Valves for Nozzles	98544, 98545
	419115 (SINGLE PACK)		98030, 98031, 98032, 98035, 98036, 98040
	98687 (5 PACK)		916282
	ANZ023N01	Standard Nozzle Adapter with Check Valve and Jam Nut	98033, 98034
	988108 (5 PACK)	1-Hole Nozzle 0.08 in. diameter cone tip (5 pack)	98544, 98545
	985225 (5 PACK)		98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040
	916050		916282
	985110	2-Hole Nozzle 0.06 in. diameter x 0.39 in. spacing	98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040, 98544, 98545
	985111		3-Hole Nozzle 0.06 in. diameter x 0.20 in. spacing
	985112	Diagonal Extension Nozzle Tip = 0.14 in. diameter x 1.23 in. long	98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040, 98544, 98545
	985113		Needle Extension Nozzle Tip = 0.05 in. diameter x 1.32 in. long
	985114	Spreader Extension Nozzle Tip = (0.09 in. x 0.25 in.) sq. x 1.32 in. long	98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040, 98544, 98545
	985115		L-Nozzle 0.06 in. diameter x 0.85 in. offset
	985116	T-Nozzle 0.06 in. diameter x 1.5 in. spacing	98033, 98034, 98035, 98036, 98040, 98544, 98545
	985122		Standard Medium Spray Nozzle 1.25 in. to 5 in. diameter pattern
	985211	Narrow Spray Nozzle 0.05 in. to 1.25 in. diameter pattern	98037, 98041
	985216		Ultra-Wide Spray Nozzle 1.5 in. to 6.0 in. diameter pattern

For custom hot melt dispense nozzles, contact the Special Equipment Group of Henkel at 1-800-LOCTITE (562-8483).

LOCTITE® PRODUCT	ITEM NUMBER	DESCRIPTION	USED WITH
	984999	Standard 1-Hole Nozzle with Integral Check Valve – Tip = 0.10 in. diameter x 0.16 in. long	98029, 916281
	985001		98029, 916281
	985002	Pencil Point Nozzle with Integral Check Valve – Tip = 0.08 in. diameter x 0.24 in. long	98029, 916281
	985003		98029, 916281
	985004	Precision Nozzle with Integral Check Valve – Tip = 0.05 in. diameter x 0.20 in. long	98029, 916281
	985005		98029, 916281
	985005	Silicone Rubber Safety Cap (2 pack) (for use with 984999, 985002, 985004)	98029, 916281
	98012		98011
	984261	Cartridge Pre-Heater Holds (2) 300 ml cartridges	98011
	984262		98011
	984262	Standard 1-Hole Nozzle 0.098 in. diameter cone tip, with integral check valve (includes protective cap)	98011
	984263		98011
	984263	Adapter/Check Valve for Specialty Nozzles	98011
	984264		98011
	984264	Needle Jet Nozzle Tip = 0.051 in. diameter x 1.26 in. long (requires 984263 adapter)	98011
	984265		98011
	984265	Diagonal Extension Nozzle Tip = 0.123 in. diameter x 1.276 in. long (requires 984263 adapter)	98011
	984267		98011
	984267	2-Hole Nozzle 0.06 in. diameter x 0.39 in. spacing (requires 984263 adapter)	98011
	984268		98011
	984268	3-Hole Nozzle 0.06 in. diameter x 0.20 in. spacing (requires 984263 adapter)	98011
	984272		98011
	984272	Injection Needle Nozzle with Integral Check Valve Tip = 0.059 in. diameter x 0.197 in. long	98011
	985087		98030, 98031, 98032, 98035, 98036, 98037, 98040, 98041
	985087	Heavy Duty Metal Stand for Benchtop or Wall Mounting	98030, 98031, 98032, 98035, 98036, 98037, 98040, 98041
	985243		All Hot Melt Applicators
	985243	Tool Hanger/Balancer – 0 to 1.5 kg	All Hot Melt Applicators
	985397		All Pneumatic Applicators