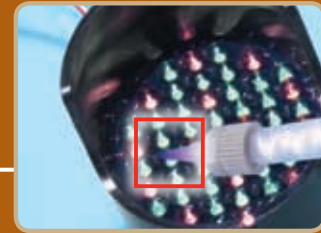


Your Source for
POTTING & ENCAPSULATING



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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

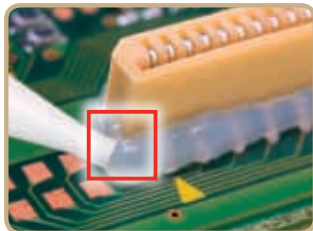
There are a variety of potting and encapsulating compounds to choose from – epoxy, hot melt, silicone and urethane. The thermal properties of epoxy and silicone systems make them ideally suited for applications exposed to temperatures above 257°F (125°C). If a soft, flexible material is needed, particularly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

STRAIGHT FROM *The Source*



Your Source POTTING & ENCAPSULATING SELECTOR GUIDE

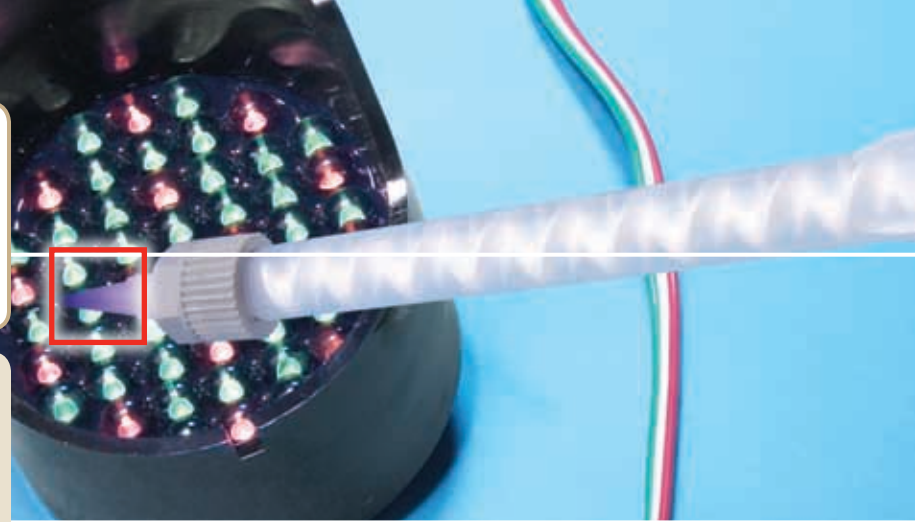
PERFORMANCE CONSIDERATIONS	POTTING & ENCAPSULATING COMPOUNDS			
	HOT MELTS	POLYURETHANES	EPOXIES	SILICONES
BENEFITS	Fast, large gap filling	Excellent toughness/flexibility	Wide range of formulations	Excellent temperature resistance
LIMITATIONS	Low heat resistance	Liquid adhesive sensitive to moisture	Mixing required	Low strength
TEMPERATURE RESISTANCE	-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)
FLUID RESISTANCE				
POLAR SOLVENTS¹	Good (Polyolefins, Polyamides)	Good	Very Good	Good
NON-POLAR SOLVENTS²	Good (Polyamides)	Good	Excellent	Poor
HARDNESS	Semisoft	Soft	Rigid	Soft
FLEXIBILITY	High	High	Low	Very High
GLASS TRANSITION TEMPERATURE (T_g)	Low	Low	High	Very Low
PERFORMANCE CONSIDERATIONS	POTTING & ENCAPSULATING COMPOUNDS			
	HOT MELTS	POLYURETHANES	EPOXIES	SILICONES
NUMBER OF COMPONENTS	1	2	2	1
CURE TEMPERATURE	Room Temperature (applied at elevated temperature)	Room Temperature	Room Temperature	UV/Room Temperature
GEL TIME				
AVERAGE	60 seconds	1 to 3 hours	1 to 3 hours	30 seconds
FASTEST	10 to 20 seconds	15 minutes	15 minutes	5 seconds
FULL CURE TIME	1 hour (or when cooled)	24 hours	24 hours	24 hours
DEPTH OF CURE	Unlimited	Unlimited	Unlimited	Shallow (<1.5 in.)
DISPENSING/CURING EQUIPMENT REQUIRED?	Yes	Yes	Yes	Yes
LIGHT CURE VERSIONS AVAILABLE?	No	No	Yes	Yes

¹ Examples of Polar Solvents: Water, Ethylene Glycol, Isopropyl Alcohol, Acetone.

² 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® 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 29325 200 ml dual cartridge 29326 400 ml dual cartridge	Black	60 min.	85	CFIA	Electrically noncorrosive, low viscosity
	E-30CL™	29329 50 ml dual cartridge 29330 200 ml dual cartridge 29331 400 ml dual cartridge	Clear	30 min.	85	N/A	Medium fixture, chemical resistant
	E-40EXP™	1511184 50 ml dual cartridge 1511653 200 ml dual cartridge 1511896 5 gallon pail - part A 1511897 5 gallon pail - part B	Black	35 min.	80	UL 674	Chemical resistant, use in hazardous locations

[Loctite® Hysol® Epoxies Product Chart]

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

[Loctite® Hysol® Polyurethanes Product Chart]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	PACKAGE WEIGHT	KEY FEATURES
LOCTITE® HYSOL® POLYURETHANES RESINS	3173™	39984 1 quart can 39985 1 gallon pail 39986* 5 gallon pail	2.5 lbs. 10 lbs. 50 lbs.	General-Purpose
	3182™	39995 1 gallon pail 39996* 5 gallon pail 39997* 55 gallon drum	12 lbs. 62 lbs. 625 lbs.	Fast Cure
LOCTITE® HYSOL® POLYURETHANES HARDENERS	3183™	39998 1 gallon pail 39999* 5 gallon pail	7.5 lbs. 37 lbs.	General-Purpose
	3184™	39398 1 gallon pail 39397* 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 181](#).

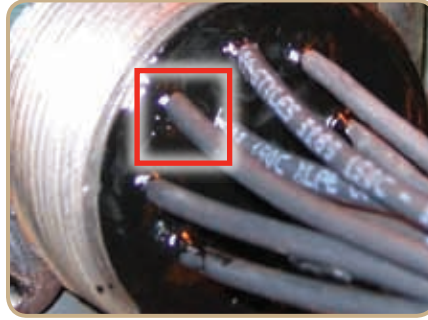
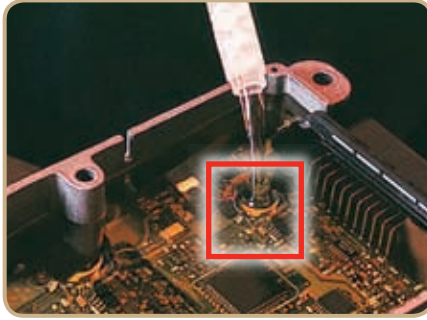


ADDITIONAL
RESOURCES

[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	3364™ NEW	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



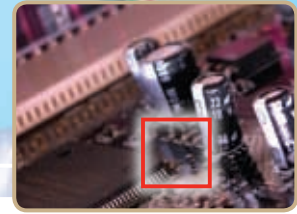
[Applications]

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

[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 OO	N/A	N/A	N/A	
	GLASS TRANSITION TEMPERATURE/T _g (°C)	-10	-16	-15	
	CTE ABOVE T _g (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**

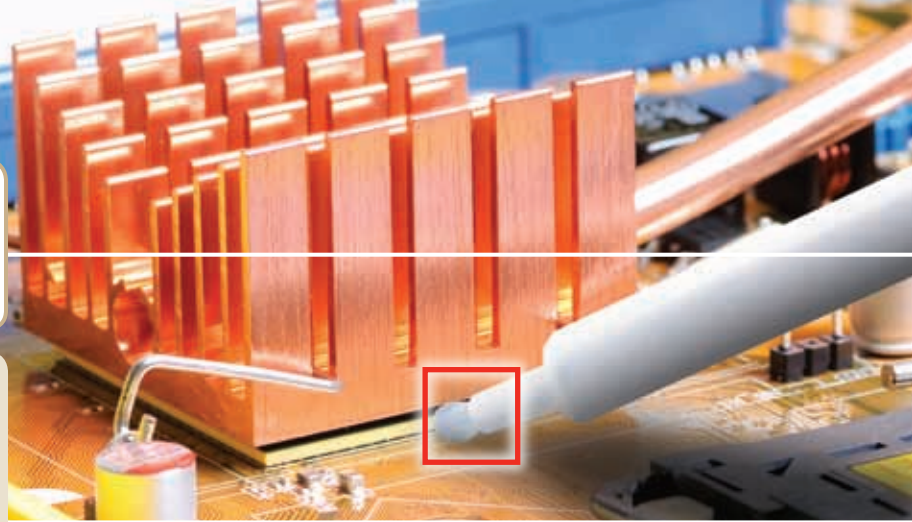


SYSTEM CHARACTERISTICS			LOCTITE® 3140™ HYSOL® EPOXY SYSTEM					LOCTITE® 3141™ HYSOL® EPOXY SYSTEM				
			3140™/3160™	3140™/3162™	3140™/3163™	3140™/3164™	3140™/3165™	3141™/3160™	3141™/3162™	3141™/3163™	3141™/3164™	3141™/3165™
TYPICAL UNCURED PROPERTIES	VISCOSITY (cP)	Resin	11,000	11,000	11,000	11,000	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	6.5:1	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/T _g (°C)		27	35	20	27	67	43	75	38	31	104
	CTE ABOVE T _g (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 T _g (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
	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

**Loctite® 5055™ Silicone
 Adhesive Sealant**

SELF-LEVELING/FLOWABLE

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**

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**

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

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

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

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

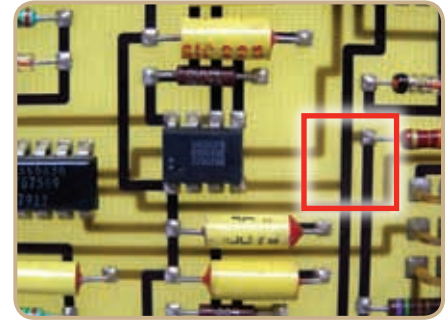
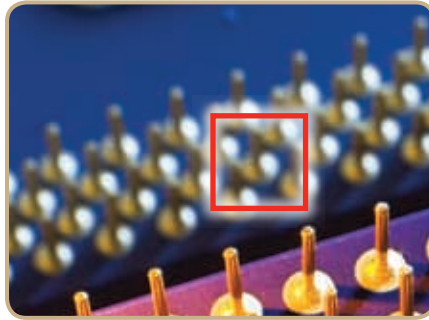
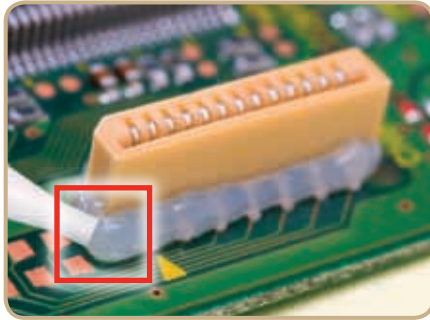
**Loctite® 5611F™/5611S™
 Silicone Potting Compound**

**SELF LEVELING, NONCORROSIVE,
 FLAME RETARDANT**

Two-part, flame retardant (UL 94V-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.



[Loctite® Silicone Potting Compounds Properties Chart]

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE & SIZE	CURE SCHEDULE (Cure/Air. Cure)	VISCOSITY (cP)	GEL TIME	HARDNESS	AGENCY APPROVALS
5031™ NUVA-SIL®	40086 40087	300 ml cartridge 40 lb. pail	UV/visible light/moisture 60 seconds @ 40 mW/cm ²	5,500	Seconds	34 Shore A	N/A
5040™	40405 40404	85 g tube 300 ml cartridge	Moisture 24 hours @ 77°F (25°C)	35,000	<3 hours (skin over)	30 Shore A	MIL-A-46146B
5055™	1212167 1214246 1214247**	25 ml syringe 1 liter bottle 15 liter pail	60 seconds @ 70 mW/cm ²	525	Seconds	55 Shore A	ISO® 10993 Compliant
5056™	1214249 1214250 1214248**	25 ml syringe 1 liter bottle 15 liter pail	60 seconds @ 70 mW/cm ²	2,200	Seconds	43 Shore A	ISO® 10993 Compliant
5091™ NUVA-SIL®	17412 18074	300 ml cartridge 40 lb. pail	UV/moisture 60 seconds @ 40 mW/cm ²	5,500	Seconds	34 Shore A	UL Classified for U.S.
5240™ NUVA-SIL®	1010341 1010320 1010343	30 ml syringe 300 ml cartridge 40 lb. pail	60 seconds @ 70 mW/cm ²	18,000	Seconds	45 Shore A	ISO® 10993 Compliant
5611F™	1385991 1387908 - Part A 1387706 - Part B 1386373 - Part A 1432213 - Part B	490 ml dual cartridge 4.5 gallon pail 4.5 gallon pail 575 lb. drum 440 lb. drum	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
5611S™	1386378 1387908 - Part A 1388496 - Part B 1386373 - Part A 1387212 - Part B	490 ml dual cartridge 4.5 gallon pail 4.5 gallon pail 575 lb. drum 440 lb. drum	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
5620™	1257593 1257478 1257595 1257597 1257594 1257596	50 ml dual cartridge 400 ml dual cartridge Part A - 40 lb. pail Part B - 40 lb. pail Part A - 400 lb. drum Part B - 400 lb. drum	Two-Part 30 minutes @ 77°F (25°C)	A: 220 B: 190 Mixed: 200	20 minutes*	35 Shore A	N/A
5623™	1259300 1257611 1257607 1257612 1257609	400 ml dual cartridge Part A - 40 lb. pail Part B - 40 lb. pail Part A - 400 lb. drum Part B - 400 lb. drum	Two-Part 1 hour @ 212°F (100°C) 24 hours @ 77°F (25°C)	A: 700 B: 700 Mixed: 700	120 minutes*	40 Shore 00	N/A
5625™	1257475 1257616 1257613 1257617 1257615	400 ml dual cartridge Part A - 40 lb. pail Part B - 40 lb. pail Part A - 400 lb. drum Part B - 400 lb. drum	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 Shore 00	N/A

ITEMS IN RED = Source's PICK or NEW





* 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.



LOCTITE® PRODUCT		ITEM NUMBER	PRESSURE REGULATION	USED TO DISPENSE	PACKAGE TYPE & SIZES	VISCOSITY RANGE	LOW LEVEL SENSING	CONSUMABLES – DISPENSE ACCESSORIES	
PNEUMATIC CARTRIDGE DISPENSING									
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 183
		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
HIGH VISCOSITY FLUID AND PASTE VALVES									
VALVES & PUMPS		HIGH PRESSURE DISPENSE VALVE – 50 BAR	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 182-186
		HIGH PRESSURE DISPENSE VALVE – 150 BAR		1153502			500,000 - 2,000,000 cP	Yes	

ITEMS IN RED = *Source's PICK* or *NEW*

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 171.**

Can't find what you're looking for? Visit 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 #	Description
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. carton
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 #	Description
83390	Superstick 10 in. 13 oz. bag
83675	Superstick 10 in. 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 #	Description
83337	5 lb. sample bag pellets
83339	Polyshot 13 oz. sample bag
83340	Polyshot 25 lb. pail
83338	40 lb. carton pellets

Loctite® 7901™ Hysol® Hot Melt Adhesive

POLYAMIDE

Low viscosity polyamide used extensively for potting and encapsulating.

Item #	Description
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	Tan	5,000	250	30 seconds	142°F	500	N/A	FDA CFR175.105
		83267								
		83269								
		83271								
		83272								
		83273								
		83274								
		83275								
		83276								
		83277								
7809FR™ HYSOL®	83390	Superstick 10 in. 13 oz. bag	Amber	7,000	363	35 seconds	240°F	373	85	UL Classified for U.S.
	83675	Superstick 10 in. 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®	83342	40 lb. carton pellets	Amber	750	260	35 seconds	300°F	80	84	N/A
	83344	Polyshot 25 lb. pail								

You can find more Loctite® Hot Melt Adhesives in the bonding section on pages 13-16. Please see pages 115-116 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.





















LOCTITE® PRODUCT		ITEM NUMBER	STICK DIAMETER	DISPENSE MELT RATE	DISPENSE POWER	DISPENSE TEMPERATURE	HOT MELT CHEMISTRY	HOT MELT NOZZLES AND ACCESSORIES
1/2-INCH SUPERSTICK DISPENSERS								
	HYSOL™ 050A	916282	1/2 in. Superstick Sticks	4 lbs./hr.	Manual	383°F (195°C)	EVA/Polyolefin	Hot Melt Nozzles and Accessories – Page 116
	HYSOL™ 050-HT	98545	1/2 in. Superstick Sticks	4 lbs./hr.	Manual	419°F (215°C)	Polyamide	
3/4-INCH MAXISTICK DISPENSERS								
	HYSOL™ 075	98033	3/4 in. Maxistick Sticks	9 lbs./hr.	Manual	360°F (182°C)	EVA	Hot Melt Nozzles and Accessories – Page 116
	HYSOL™ 075-LT	98034	3/4 in. Maxistick Sticks	5 lbs./hr.	Manual	250°F (121°C)	CoolMelt™	
1 3/4-INCH SPRAYPAC® & POLYSHOT DISPENSERS								
	HYSOL™ 175-AIR	98036	1 3/4 in. Polyshot Sticks	8 lbs./hr.	Pneumatic	383°F (195°C)	EVA/Polyolefin	Hot Melt Nozzles and Accessories – Page 116
	HYSOL™ 175-AIR-HT	98040	1 3/4 in. Polyshot Sticks	8 lbs./hr.	Pneumatic	419°F (215°C)	EVA/Polyolefin	
	HYSOL™ 175-SPRAY	98037	1 3/4 in. Polyshot Sticks	8 lbs./hr.	Pneumatic	356°F (180°C)	EVA/Polyolefin	
	HYSOL™ 175-SPRAY-HT	98041	1 3/4 in. Polyshot Sticks	8 lbs./hr.	Pneumatic	383°F (195°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	
URETHANE DISPENSER								
	HYSOL™ REACTIVE URETHANE CARTRIDGE DISPENSER	98011	N/A	3 lbs./hr.	Air	250°F (121°C)	Reactive Urethane	Hot Melt Nozzles and Accessories – Page 116
HOT MELT BENCH MOUNT & CONTROLLER OPTIONS								
	HOT MELT BENCH MOUNT KIT	98042	N/A	N/A	N/A	N/A	EVA/Polyamide	Hot Melt Nozzles and Accessories – Page 116
	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 <i>(SINGLE PACK)</i>	Adapter/Check Valves for Nozzles	98544, 98545
	419115 <i>(SINGLE PACK)</i>		98030, 98031, 98032, 98035, 98036, 98040
	98687 <i>(5 PACK)</i>		916282
	ANZ023N01	Standard Nozzle Adapter with Check Valve and Jam Nut	98033, 98034
	988108 <i>(5 PACK)</i>	1-Hole Nozzle 0.08 in. diameter cone tip (5 pack)	98544, 98545
	985225 <i>(5 PACK)</i>		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	98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040, 98544, 98545
	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	98030, 98031, 98032, 98033, 98034, 98035, 98036, 98040, 98544, 98545
	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	98033, 98034, 98035, 98036, 98040, 98544, 98545
	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	98037, 98041
	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	98037, 98041

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
	985001	Spreader Nozzle with Integral Check Valve – Tip = (0.08 in. x 0.25 in.) sq. x 0.47 in. long	98029
	985002	Pencil Point Nozzle with Integral Check Valve – Tip = 0.08 in. diameter x 0.24 in. long	98029
	985003	Precision Nozzle with Integral Check Valve – Tip = 0.05 in. diameter x 0.20 in. long	98029
	985004	Extension Nozzle with Integral Check Valve – Tip = 0.10 in. diameter x 0.50 in. long	98029
	985005	Silicone Rubber Safety Cap (2 pack) (for use with 984999, 985002, 985004)	98029
	98012	Cartridge Pre-Heater Holds (2) 300 ml cartridges	98011
	984261	Standard Adapter for 300 ml Cartridges	98011
	984262	Standard 1-Hole Nozzle 0.098 in. diameter cone tip, with integral check valve (includes protective cap)	98011
	984263	Adapter/Check Valve for Specialty Nozzles	98011
	984264	Needle Jet Nozzle Tip = 0.051 in. diameter x 1.26 in. long (requires 984263 adapter)	98011
	984265	Diagonal Extension Nozzle Tip = 0.123 in. diameter x 1.276 in. long (requires 984263 adapter)	98011
	984267	2-Hole Nozzle 0.06 in. diameter x 0.39 in. spacing (requires 984263 adapter)	98011
	984268	3-Hole Nozzle 0.06 in. diameter x 0.20 in. spacing (requires 984263 adapter)	98011
	984272	Injection Needle Nozzle with Integral Check Valve Tip = 0.059 in. diameter x 0.197 in. long	98011
	985087	Heavy Duty Metal Stand for Benchtop or Wall Mounting	98030, 98031, 98032, 98035, 98036, 98037, 98040, 98041
	985243	Tool Hanger/Balancer – 0 to 1.5 kg	All Hot Melt Applicators
	985397	Air Line Filter, Regulator Gauge 0 to 150 psi	All Pneumatic Applicators