

LOCTITE[®]

Loctite[®] Instant Adhesives

Instant Solutions in Every Drop



Excellence is our Passion



Instant Solutions

Innovation Portfolio

Loctite® Instant Adhesives are the most diverse line of cyanoacrylates adhesives (CAs) available, providing you with fast assembly solutions for a variety of materials, including plastics, elastomers and metals. Our history of high quality innovation and commitment to technical support means you can rely on Henkel to be your total solutions provider from start to finish.

In this brochure, the terms instant adhesives, cyanoacrylate and CA are used interchangeably.

Contents

- Product Selector Guide4-5
- Faster Solutions.....6-7
- Superior Solutions8-9
- Toughened Solutions.....10-11
- Equipment Solutions12-13
- Technical Solutions.....14
- Instant Adhesives FAQ14-15

Why Loctite® Instant Adhesives?

Loctite® Instant Adhesives are extremely versatile and easy to use. They are one-component products (eliminating mixing issues), they cure at room temperature without the need for heat or light energy, and they yield very high bond strengths to plastics, metals, rubbers, wood and many other substrates.

Why Loctite®? Innovation

Henkel’s commitment to provide instant solutions in every drop of instant adhesive has led us to develop faster fixture times, greater surface versatility, toughened performance, improved shelf life, and dispensing equipment that is more efficient and easier to use. Our unparalleled investment in research and development has made us the technology leader and allows us to provide our customers with the highest level of performance available in an instant adhesive.

Why Loctite®? Support

From design and product development to the final manufacturing process, Henkel adhesive specialists provide you with a wealth of expertise to meet your instant bonding challenges. Our approach is one of flexibility, allowing us to draw on our global technical expertise to provide a solution to support your specific goals. When you choose Loctite® Instant Adhesives, you get a partner in Henkel who will provide you with the technical support and instant solutions you need.

Instant Solutions in Every Drop



Innovative Solutions

New & Improved Products

Performance



New & Improved

Premium Upgrades

The industry’s strongest and fastest instant adhesives have set a new standard for performance. With temperature resistance up to 250°F (121°C), you can keep the strength and fixture time you need in higher heat applications. See page 6 to learn more about the new and improved Loctite® 401™, 406™ and 454™.



New & Improved

Low Odor, Low Bloom Superior Upgrades

Our superior solutions continue to outperform expectations with the addition of added temperature and humidity resistance. Rely on our innovative low odor, low bloom products to solve even the toughest assembly challenges. See page 8 to learn about the new and improved Loctite® 455™, 403™, 408™ and 460™.



New

Loctite® 3092™

Loctite® 3092™ is a two-component, rapid cure cyanoacrylate adhesive for bonding a variety of plastics. Its unique properties offer the speed and strength of a traditional cyanoacrylate with the value of added gap filling up to 0.200" (5mm). See page 9 to learn more.



New

CA Volumetric Hand Pump

The new Loctite® CA Volumetric Hand Pump is available for dispensing instant adhesives from 20 g and 1 oz. bottles. The completely sealed system extends the life of Loctite® instant adhesive by preventing curing in the bottle, while the easy to use design provides six pre-set shot size settings for precision repeatable dispensing of instant adhesives. See Page 12 to learn more. Product #1506577.

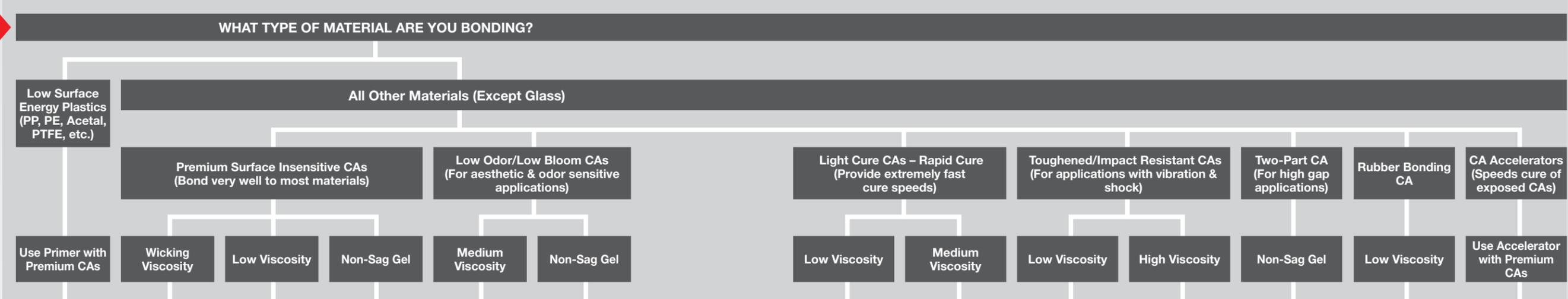
Instant Solutions

Product Selector Guide



- One-component, no-mix products that cure rapidly at room temperature without heat or light, make cyanoacrylates exceptionally easy to use.
- Excellent bond strength to the widest range of plastics, rubbers and metals.
- Widest selection of products, including specialty grades suitable for applications where impact resistance, flexibility, gap filling, low odor or extremely fast curing is required.

Your Application



Solution

	770™	406™	401™	454™	403™	455™	4310™	4311™	435™	411™	3092™	404® Quick Set™	7452™
Color	Clear	Clear	Clear	Clear	Clear	Clear	Clear/Pale Green	Clear/Pale Green	Clear	Clear	Clear	Clear	Clear/Amber
Gap Fill (in.)	N/A	0.004	0.005	0.010	0.008	0.010	0.004	0.008	0.006	0.008	0.200	0.005	N/A
Viscosity (cP)	1.25	20	90	Gel	1,200	Gel	175	1,050	175	5,000	Gel	80	0.4
Shear Strength* (psi)	N/A	3,200	3,200	3,200	2,600	2,600	3,190**	3,760**	2,700	3,200	3,200	3,500	N/A
Temperature Range	N/A	-65°F (-54°C) to 250°F (121°C)	-65°F (-54°C) to 250°F (121°C)	-65°F (-54°C) to 250°F (121°C)	-65°F (-54°C) to 200°F (93°C)	-65°F (-54°C) to 200°F (93°C)	-65°F (-54°C) to 240°F (116°C)	-65°F (-54°C) to 240°F (116°C)	-65°F (-54°C) to 225°F (107°C)	-65°F (-54°C) to 210°F (99°C)	-4°F (-20°C) to 176°F (80°C)	-65°F (-54°C) to 180°F (82°C)	N/A
Fix Time (sec.)	N/A	15	15	15	50	40	<5 [‡]	<5 [‡]	30	30	15 sec. [§] 3.5 min. [§]	30	N/A

Product Description

Loctite® 770™ Primer
A heptane based adhesion promoter formulated for use with polyolefins and other low surface energy plastics. Use with Loctite® Premium Surface Insensitive CAs. Fast dry time and good on part life. See page 11.

Loctite® 406™ Instant Adhesive
Wicking viscosity CA for tight bond lines. Surface insensitive grade providing excellent bond strengths to many materials including plastics, elastomers metals and platings. Excellent for dry or acidic conditions. See page 6.

Loctite® 401™ Instant Adhesive
Low viscosity surface insensitive CA provides excellent bond strengths to most materials including plastics, elastomers metals and platings. Excellent for dry or acidic conditions. See page 6.

Loctite® 454™ Instant Adhesive
Surface insensitive CA providing excellent bond strengths to many materials including plastics, elastomers, metals and platings. Excellent for dry or acidic conditions. Non-sag gel prevents drips. See page 6.

Loctite® 403™ Instant Adhesive
Low odor, low blooming CA well suited for cosmetic applications or where vapor ventilation is difficult. Surface insensitive providing excellent bond strengths to most materials. See page 8.

Loctite® 455™ Instant Adhesive
Low odor, low blooming CA well suited for cosmetic applications or where vapor ventilation is difficult. Surface insensitive providing excellent bond strengths to most materials. Non-sag gel prevents drips. See page 8.

Loctite® 4310™ Flashcure® Light Cure Adhesives
Light cure CA cures where light reaches and also in shadowed areas via surface moisture. Toughened, fluorescent adhesive that cures tack free in 2-5 seconds. Lower viscosity for tighter bond lines. See page 7.

Loctite® 4311™ Flashcure® Light Cure Adhesives
Light cure CA cures where light reaches and also in shadowed areas via surface moisture. Toughened, fluorescent adhesive that cures tack free in 2-5 seconds. Higher viscosity to minimize dripping. See page 7.

Loctite® 435™ Instant Adhesive
Low viscosity toughened CA with increased flexibility, peel strength and resistance to shock. Surface insensitive providing excellent bond strengths to most materials. See page 10.

Loctite® 411™ Instant Adhesive
High viscosity toughened CA with increased flexibility, peel strength and resistance to shock. Surface insensitive providing excellent bond strengths to most materials. See page 10.

Loctite® 3092™ Instant Adhesive
Fast two-part CA bonds gaps up to 0.200" (5 mm). Particularly suited for bonding plastics, rubbers, wood, paper and metals. High precision dispensing tips. See page 9.

Loctite® 404® Quick Set™ Instant Adhesive
Excellent for bonding rubbers where very fast fixturing is required. For general maintenance and repair. See page 11.

Loctite® 7452™ Tak Pak® Accelerator
Used where increased cure speed of Loctite® CAs is required. Can either be pre or post applied. See page 7.

* At 0.002" gap.
 § At 0.200" gap.
 * Grit-blasted steel.
 ** Polycarbonate.
 ‡ Full cure = 24 hours without UV exposure.

Faster Solutions

For High Speed Assembly

For manufacturing operations where rapid assembly speeds are critical, two categories of instant adhesives are available. Loctite® Premium Surface Insensitive Instant Adhesives provide fixture speeds less than 15 seconds on many substrate materials while Loctite® Light Curing Instant Adhesives provide fixture speeds less than 5 seconds on most substrate materials. Apply Loctite® Accelerators to reduce fixture/cure times and to cure exposed adhesive.



Premium, Surface Insensitive

This line of instant adhesives provides the best combination of speed, strength and high temperature performance. They are uniquely formulated to attain high bond strengths on the widest range of materials, including dry or acidic surfaces. Although fixture speeds will range by substrate material, many yield speeds of 15 seconds or less, such as steel, aluminum, ABS, PVC, polycarbonate, nitrile rubber, paper, balsa wood and phenolic to name a few. These Premium Instant Adhesives are available in a wide range of viscosities and most offer temperature resistance up to 250°F (121°C).

Top Features

- Very fast fixture speed
- Particularly suited for bonding a wide variety of materials, including metals, plastics and elastomers
- Loctite® 454™ non-drip gel is excellent for porous substrates such as paper, leather, cork and fabric
- For acidic surfaces such as wood and chromate plated parts
- Surface insensitive for faster cure in dry/low humidity environments

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS
GENERAL-PURPOSE SURFACE INSENSITIVE	401™ PRISM® <small>New & Improved</small>	40104 3 g tube 40140 20 g bottle 40161 1 lb. bottle	General-purpose	Clear	0.005	Ethyl	90	3,200	-65°F (-54°C) to 250°F (121°C)	Fixture – 15 sec. Full – 24 hrs.	1.05	CFIA
	406™ PRISM® <small>New & Improved</small>	40604 3 g tube 40640 20 g bottle 40661 1 lb. bottle	Wicking grade	Clear	0.004	Ethyl	20	3,200	-65°F (-54°C) to 250°F (121°C)	Fixture – 15 sec. Full – 24 hrs.	1.05	N/A
	431™ PRISM®	41254 3 g tube 41255 20 g bottle 41256 1 lb. bottle	Gap filling	Clear	0.008	Ethyl	900	2,300	-65°F (-54°C) to 180°F (82°C)	Fixture – 15 sec. Full – 24 hrs.	1.10	ISO 10993
	454™ PRISM® <small>New & Improved</small>	45404 3 g tube 45440 20 g tube 1337712 30 g syringe 45474 200 g tube 45478 300 g cartridge	Porous surfaces	Clear	0.010	Ethyl	Gel	3,200	-65°F (-54°C) to 250°F (121°C)	Fixture – 15 sec. Full – 24 hrs.	1.05	CFIA, ABS

* Grit-blasted steel substrate.
**Varies with substrate material.

Light-Curing

These patented products provide two curing mechanisms, the first initiated by the introduction of light energy and second by surface moisture present on the almost all substrate materials. Applying the proper light energy to adhesive exposed in open air, or through a transparent substrate, allows components to be tacked together in as little as 2 to 5 seconds. Shadowed areas of the bond line where light cannot reach will also cure via the standard cyanoacrylate moisture-curing mechanism, reaching fixture strengths in 5 to 25 seconds, and full bond strengths in 24 hours.

Top Features

- Extremely fast tack-free curing in 2 - 5 seconds
- Cure with UV/visible light
- Good cosmetic appearance
- Fluorescent for inspection purposes
- Cures in shadowed areas
- Eliminates need for accelerators
- Toughened formulas improve shock and impact resistance
- ISO 10993 biocompatible



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS
LIGHT CURE TOUGHENED	4306™ FLASHCURE®	37439 1 oz. bottle 37442* 1 lb. bottle	Close fitting parts	Clear/Pale Green	0.004	Ethyl	20	2,000	-65°F (-54°C) to 180°F (82°C)	Fixture <5 sec.	1.10	ISO® 10993
	4310™ FLASHCURE®	1401792 1 oz. bottle 1401790 1 lb. bottle	Close fitting parts	Clear/Pale Green	0.005	Ethyl	175	3,190	-65°F (-54°C) to 240°F (116°C)	Fixture <5 sec.	1.05	ISO® 10993
	4311™ FLASHCURE®	1401791 1 oz. bottle 1401789 1 lb. bottle	Gap filling	Clear/Pale Green	0.008	Ethyl	1,050	3,760	-65°F (-54°C) to 240°F (116°C)	Fixture <5 sec.	1.15	ISO® 10993

* Polycarbonate substrate.
** Fixture speeds shown for UV/visible light cure; full cure in 24 hours without light exposure.

Accelerators

Accelerators speed the cure of cyanoacrylate adhesives and are primarily used to reduce cure/fixture times and to cure exposed adhesive or bond line fillets. Accelerators can be applied to a substrate surface prior to the application of the adhesive, or sprayed over exposed adhesive for securing wires or coils, tamper proofing adjustable components, or mounting stand-offs, edge guides and board stiffeners.

Top Features

- Provide fast cure when post-applied
- Cure exposed CA bond lines or fillets
- Excellent for cosmetic applications, clear and transparent adhesive beads or fillets



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	BASE	FEATURES	ON-PART LIFE
7452™ TAK PAK® ACCELERATOR	18490	1.75 fl. oz. brush cap bottle	Acetone	• Suitable for securing wires or coils to PCBs	1 min.
	18580	1.75 fl. oz. spray cap bottle			
	18637	0.7 fl. oz. metered mist			
	18575	1 quart can			
7109™ TAK PAK® II ACCELERATOR	22440	1.75 fl. oz. bottle	Perfluorocarbon	• Nonflammable and noncombustible	1 min.
	23034	1 quart can			
712™ TAK PAK® ACCELERATOR	20352	1.75 fl. oz. bottle	Isopropanol	• Suitable for securing wires or coils to PCBs	1 min.
	18636	0.7 fl. oz. metered mist			
	18390	1 gallon can			
7113™ ACCELERATOR	19605	1.75 fl. oz. bottle	Heptane	• Suitable for loudspeaker assembly bonding and coil to ferrite magnet bonding	≤24 hrs.
	19606	1 gallon can			

Superior Solutions

For Demanding Applications

Specialty grades of Loctite® Instant Adhesives have been developed to provide superior performance in highly demanding applications. Our Low Odor/Low Bloom, Flexible and Gap-filling products go beyond conventional solutions to provide the superior performance versatility you need to meet your assembly challenges.



Low Odor, Low Bloom

Loctite® Low Odor, Low Bloom Instant Adhesives are chemically engineered to minimize blooming, the frosty white film that can occasionally be seen outside of the adhesive bond line of a traditional cyanoacrylate adhesive. In addition, these formulas will reduce the odor operators may experience in confined spaces or areas with low air-flow. These grades provide good temperature and humidity resistance and are surface insensitive to attain high bond strengths on a wide range of substrate materials, including dry or acidic surfaces. See page 15 for a technical description of blooming.

Top Features

Excellent for cosmetic applications

Low odor

Reduced white residue "blooming" or "frosting"

Surface insensitive for faster cure in dry/low humidity environments

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS
455™ PRISM® <small>New & Improved</small>	22309 17421	10 g syringe 200 g tube	Porous surfaces	Clear	0.010	Alkoxy	Gel	2,600	-65°F (-54°C) to 200°F (93°C)	Fixture – 40 sec. Full – 24 hrs.	1.10	N/A
403™ PRISM® <small>New & Improved</small>	40304 40340 40361	3 g tube 20 g bottle 1 lb. bottle	Gap filling	Clear	0.008	Alkoxy	1,200	2,600	-65°F (-54°C) to 200°F (93°C)	Fixture – 50 sec. Full – 24 hrs.	1.10	N/A
408™ PRISM® <small>New & Improved</small>	40840 40861	20 g bottle 1 lb. bottle	Wicking grade	Clear	0.002	Alkoxy	5	2,600	-65°F (-54°C) to 200°F (93°C)	Fixture – 50 sec. Full – 24 hrs.	1.05	N/A
460™ PRISM® <small>New & Improved</small>	46004 46040 46061	3 g tube 20 g bottle 1 lb. bottle	Close-fitting parts	Clear	0.004	Alkoxy	45	2,600	-65°F (-54°C) to 200°F (93°C)	Fixture – 50 sec. Full – 24 hrs.	1.10	N/A



Versatility
Versatility



Flexible

Loctite® Flexible Instant Adhesives have been specially designed for bonding flexible materials, such as the rubber and urethane often used in flexible joints and weather stripping. These solutions provide flexibility at the bond line and ensure continued performance. They are surface insensitive to allow for use across a wide variety of substrates and environments.

Top Features

Specifically designed for bonding delicate, soft or flexible substrates

Ensures flexibility even through the bond line

Suitable for porous and absorbent substrates

ISO 10993 biocompatible

Surface insensitive for dry/low humidity environments



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS
4851™ PRISM®	37732 37733	20 g bottle 1 lb. bottle	Flexible	Clear	0.006	Alkyl	400	2,175	-65°F (-54°C) to 125°F (52°C)	Fixture – 20 sec. Full – 24 hrs.	1.10	ISO® 10993
4861™ PRISM®	37708 37711	20 g bottle 1 lb. bottle	Flexible	Clear	0.008	Alkyl	4,000	2,465	-65°F (-54°C) to 125°F (52°C)	Fixture – 20 sec. Full – 24 hrs.	1.10	ISO® 10993

Gap Filling

Loctite® 3092™ is an ultra-fast, gel adhesive, which can bond gaps up to 0.200" (5mm) in depth. This two-component, auto-mix technology ensures consistent, fast curing regardless of ambient temperature and moisture conditions. Loctite® 3092™ can be used for bonding a variety of plastics, rubbers, metals and porous materials, including wood, paper and leather.

Top Features

Ultra-fast fixture time

High gap-filling capability

Non-drip formula

Convenient and precise dispensing syringe

Excellent for aesthetic applications

Excellent bond strengths on many materials

Cures tack-free in open air



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS
3092™	1321706 1434516	10 g syringe with 3 mix nozzle 5 packs of mix nozzles	High gap filling plastic bonder	Clear	0.200	Ethyl	Gel	3,200	-4°F (-20°C) to 176°F (80°C)	Fixture 0.002" gap – 15 sec. 0.200" gap – 3.5 min. Full cure – 24 hrs.	1.05	N/A

Toughened Solutions

For Challenging Environments

Loctite® Toughened Instant Adhesives and Surface Primers provide excellent performance in the most challenging environments. These specialty cyanoacrylate formulations provide superior resistance to impact, vibration and peel forces while the surface priming liquids significantly increase adhesion strengths to many low surface energy plastics commonly used in manufactured devices.



Toughened

Loctite® Toughened Instant Adhesives are uniquely formulated for applications where impact, vibration and peel forces are experienced. These cyanoacrylates provide side impact resistance ≥ 4 joules and 180° peel strengths up to 4 N/mm, far exceeding the performance of common instant adhesives.

Top Features

Very good resistance to impact and peel loads

Very good fracture toughness

Surface insensitive grades for faster cure in dry/low humidity environments

Good chemical, humidity and thermal resistance

Excellent shear strength

LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS	
TOUGHENED	380™ BLACK MAX®	38004 38050 38061	3 g tube 1 oz. bottle 1 lb. bottle	Close-fitting parts	Black	0.006	Ethyl	300	3,750	-65°F (-54°C) to 225°F (107°C)	Fixture – 90 sec. Full – 24 hrs.	1.10	CFIA
	410™ PRISM®	41004 41045 41061	3 g tube 20 g bottle 1 lb. bottle	Gap filling	Black	0.008	Ethyl	3,500	3,200	-65°F (-54°C) to 225°F (107°C)	Fixture – 90 sec. Full – 24 hrs.	1.07	CFIA
	426™ PRISM®	21921 18398 17451 17529	10 g syringe 20 g tube 200 g tube 300 g cartridge	Porous surfaces	Black	0.010	Ethyl	Gel	3,000	-65°F (-54°C) to 210°F (99°C)	Fixture – 20 sec. Full – 24 hrs.	1.10	N/A
	480™ PRISM®	48040 48061	20 g bottle 1 lb. bottle	General filling	Black	0.006	Ethyl	200	3,800	-65°F (-54°C) to 180°F (82°C)	Fixture – 90 sec. Full – 24 hrs.	1.10	NSF/ANSI 61
	411™ PRISM®	41104 41145 41161	3 g tube 20 g bottle 1 lb. bottle	Gap filling	Clear	0.008	Ethyl	5,000	3,200	-65°F (-54°C) to 210°F (99°C)	Fixture – 30 sec. Full – 24 hrs.	1.07	N/A
SURFACE INSENSITIVE	435™ PRISM®	41005 40994 40995	3 g tube 20 g bottle 1 lb. bottle	General-purpose	Clear	0.006	Ethyl	175	2,700	-65°F (-54°C) to 225°F (107°C)	Fixture – 30 sec. Full – 24 hrs.	1.10	ISO 10993
	438™ PRISM®	41006 40997 40996	3 g tube 20 g bottle 1 lb. bottle	General-purpose	Black	0.006	Ethyl	200	2,800	-65°F (-54°C) to 225°F (107°C)	Fixture – 30 sec. Full – 24 hrs.	1.10	N/A

* Grit-blasted steel substrate.
** Varies with substrate material.

Strength Strength



Rubber Bonding

Cyanoacrylate adhesives typically bond to elastomers such as neoprene and nitrile rubber extremely well with fast fixture speeds and high bond strengths. Loctite® 404® is uniquely formulated to provide the ultimate rubber bonding performance with fixture speeds of less than 5 seconds and strengths that reach well beyond the strength of the rubber itself.

Top Features

Very fast fixturing of elastomers and plastics

Bond strengths in excess of material strengths for elastomers and plastics

Multiple agency approvals



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE TYPE/SIZE	TYPICAL USE	COLOR	GAP FILL (INCHES)	CATEGORY	VISCOSITY (cP)	SHEAR STRENGTH* (psi)	TEMPERATURE RANGE	CURE SPEED**	SPECIFIC GRAVITY	AGENCY APPROVALS	
GENERAL-PURPOSE	404™ QUICK SET™	46551 46548 46561	1/3 oz. bottle 4 oz. bottle 1 lb. bottle	Rubber O-ring bonder	Clear	0.005	Ethyl	80	3,500	-65°F (-54°C) to 180°F (82°C)	Fixture – 30 sec. Full – 24 hrs.	1.09	ABS, CFIA, Commercial item std. A-A-3097

* Grit-blasted steel substrate.
** Varies with substrate material, elastomers less than 5 seconds.

Surface Primers

Loctite® Surface Primers are specially formulated for use with any Loctite® Instant Adhesive to increase adhesion strengths to difficult to bond substrates which include Polyethylene, Polypropylene, PTFE and thermoplastic rubber materials. To obtain the highest performance, assemblies should be bonded shortly after surface primer base flashes off.

Top Features

Adhesion promoter

Nonflammable and noncombustible formulas

Brush and wipe application options



LOCTITE® PRODUCT	ITEM NUMBER	PACKAGE SIZE	BASE	FEATURES	ON-PART LIFE
770™ PRISM® PRIMER	18396 18397	1.75 fl. oz. bottle 16 oz. can	Heptane	• Long on-part life • Fluorescent under UV light / black light	≤8 hrs.
	7951™ PRISM® PRIMER	27858	1.75 fl. oz. bottle	Perfluorocarbon and Chlorobenzotrifluoride	• Nonflammable and noncombustible





Dispensing & Curing Equipment

From manually operated devices to fully automated systems, Henkel offers a complete line of Loctite® brand dispensing and light-curing equipment which can be easily integrated into your manufacturing process. Selection of a Loctite® brand system is based on the product being used, viscosity, package size and process requirements. For more information on our complete equipment offering, visit our equipment website at www.equipment.loctite.com or call 1.800.LOCTITE (562.8483) in the U.S. or 1.800.263.5043 in Canada to speak with a technical representative.

Modular Dispense Systems

Henkel offers a complete line of Loctite® controllers, reservoirs and dispense valves, allowing you to create a custom dispensing system to meet your specific needs and manufacturing goals.

Reservoir Controllers

LOCTITE® PRODUCT	ITEM NUMBER	PRESSURE REGULATION	PACKAGE TYPE/SIZE	VISCOSITY RANGE	LOW LEVEL SENSING	
INTEGRATED RESERVOIR CONTROLLERS — Space saving and economical, combined controller and reservoir for valve dispensing.						
	Loctite® Dual Channel Integrated Semi Automatic Dispenser	1390322	0 to 15 psi	1 lb. bottle 2 kg bottle	0-3,000 cP	No Yes
		1390321	0 to 100 psi	200 g squeeze tube	>3,000 cP	No Yes

Handheld Valves

LOCTITE® PRODUCT	ITEM NUMBER	TYPE	VISCOSITY RANGE	DISPENSE PATTERNS	STROKE ADJUSTMENT	ACTUATION
LOW VISCOSITY CYANOACRYLATE APPLICATOR						
	Loctite® LV Hand-Held Applicator	97130	Pneumatic	0-10,000 cP	Drop, dot, bead	Yes Foot

Mounted Valves

LOCTITE® PRODUCT	ITEM NUMBER	TYPE	VISCOSITY RANGE	DISPENSE PATTERNS	USED TO DISPENSE	STROKE ADJUSTMENT	SUCK BACK
HIGH PRECISION VALVES							
	Loctite® Stationary Applicator Valve	97113 (1/4" OD Tube)	High precision	Low to medium performance diaphragm	Drop, dot, bead	Gel Instant Adhesives, Instant Adhesives, Retaining Compounds, Threadlockers	Yes
		97114 (3/8" OD Tube)					
	Loctite® VA10 Micro Diaphragm Valve	1611449	High precision	Low to medium	Drop, bead	Gel Instant Adhesives, Instant Adhesives, Retaining Compounds, Threadlockers	Yes No
	Loctite® Micro Needle Valve	98084	High precision	Low to medium	Drop, dot, bead, microdots	Light Cure/Acrylics	Yes No
HIGH PERFORMANCE DIAPHRAGM VALVES							
	Loctite® Light Cure Dispense Valve	98009	High performance diaphragm	Low to medium	Drop, dot, bead	Light Cure/Acrylics, Retaining Compounds, Threadlockers	Yes No
	Loctite® Cyanoacrylate Dispense Valve	98013	High performance diaphragm	Low to medium	Drop, dot, bead, microdots	Instant Adhesives, Retaining Compounds, Threadlockers	Yes No



Loctite® CA Volumetric Hand Pump

Extend the bottle life of your Loctite® Instant Adhesives by using the completely sealed Loctite® CA Volumetric Hand Pump. Save yourself time and money by eliminating breakdown and setup steps. Reduce waste and ensure bond strength with exact dispensing volumes.

- Easy manual operation
- Light-weight ergonomic design
- Works with Loctite® Dispense Tips
- Works with 20 g and 1 oz. bottles
- Adjustable dispense volumes

Item #1506577



Complete Dispense Systems

These Loctite® brand dispense systems are ready for immediate operation and offer the manufacturing flexibility and reliability you're looking for.

LOCTITE® PRODUCT	ITEM NUMBER	DISPENSE PATTERNS	PACKAGE TYPE/SIZE	VISCOSITY RANGE	
VOLUMETRIC BOTTLE DISPENSERS — Dispense adhesive directly from product bottle with no reservoirs required.					
	Loctite® Benchtop Peristaltic Dispenser	98548	Dot, drop, bead	Any	0 to 5,000 cP
PRESSURE-TIME BOTTLE AND SYRINGE DISPENSE SYSTEMS — Equipped with all components needed to dispense a wide range of products in a variety of adhesive bottle sizes.					
	Loctite® Bond-A-Matic® 3000 Dispenser 0-15 psi	982719	Dot, drop, bead	1 lb. bottle 2 kg bottle 200 g squeeze tube	0-3,000 cP
	Loctite® Bond-A-Matic® 3000 Dispenser 0-100 psi	982722			>3,000 cP
	Loctite® Digital Syringe Dispense System	883976	Drop, bead	30 g syringe	Gel

Light Cure Solutions

Henkel offers the widest selection of light-curing equipment available from any one company in the market today. Our Loctite® brand ensures you have the most innovative and dependable systems for all your light-curing adhesive applications.

LOCTITE® PRODUCT	ITEM NUMBER	WAVELENGTH	
LED SPOT CURING DEVICES — High-powered and portable for light cure adhesives, providing effective spot curing solutions for both manual or integrated automatic systems.			
	Loctite® CureJet™ 405 LED	1369538	405
	Loctite® CureJet™ 375 LED	1369539	405

LOCTITE® PRODUCT	ITEM NUMBER	LAMP TYPE	
LED FLOOD SYSTEMS — This system is ideal for batch processing. UV and alternate visible light bulb options are available.			
	Loctite® Flood Array System 405 LED	1167582	405
	Loctite® Flood Cure 375	1167593	405

LOCTITE® PRODUCT	ITEM NUMBER	LAMP TYPE	
LED CURING DEVICES — High powered and portable for light cure adhesives, providing effective spot curing solutions for both manual or integrated automatic systems.			
	Loctite® 7700 Hand Held Light Source	98591	405
	Loctite® 7700-HD Hand Held Light Source	1427231	405

Dispense Tips



Henkel offers a comprehensive line of Loctite® brand dispense tips, which include:

- High precision stainless steel tips
- Tapered polyethylene tips
- Flexible polypropylene tips

All feature a positive locking helical thread design to ensure the tip will stay intact during the toughest applications. For your less critical applications, we offer more economical general-purpose tips that still provide reliable and consistent dispensing, shot after shot.

Ideal for use on:

- 20 g bottles
- 1 oz. bottles
- 30 g syringes

Technical Solutions

Service & Support

ENGINEERING Services

- Process Consultations
- Customer Teardowns
- Custom Equipment
- Customer Line Surveys
- Material Properties Testing
- Adhesive Performance
- Surface Analysis
- Process Optimization
- Equipment Support

To access these and other Henkel Engineering Services, contact our Adhesive and Sealant Specialists by calling 1.800.LOCTITE (562.8483) in the U.S. and 1.800.263.5043 in Canada.



Henkel is in the business of solving customers' problems. When customers buy Loctite® brand instant adhesives, they get more than a product – they get a partner who will work side by side with them to find innovative solutions to their manufacturing problems.

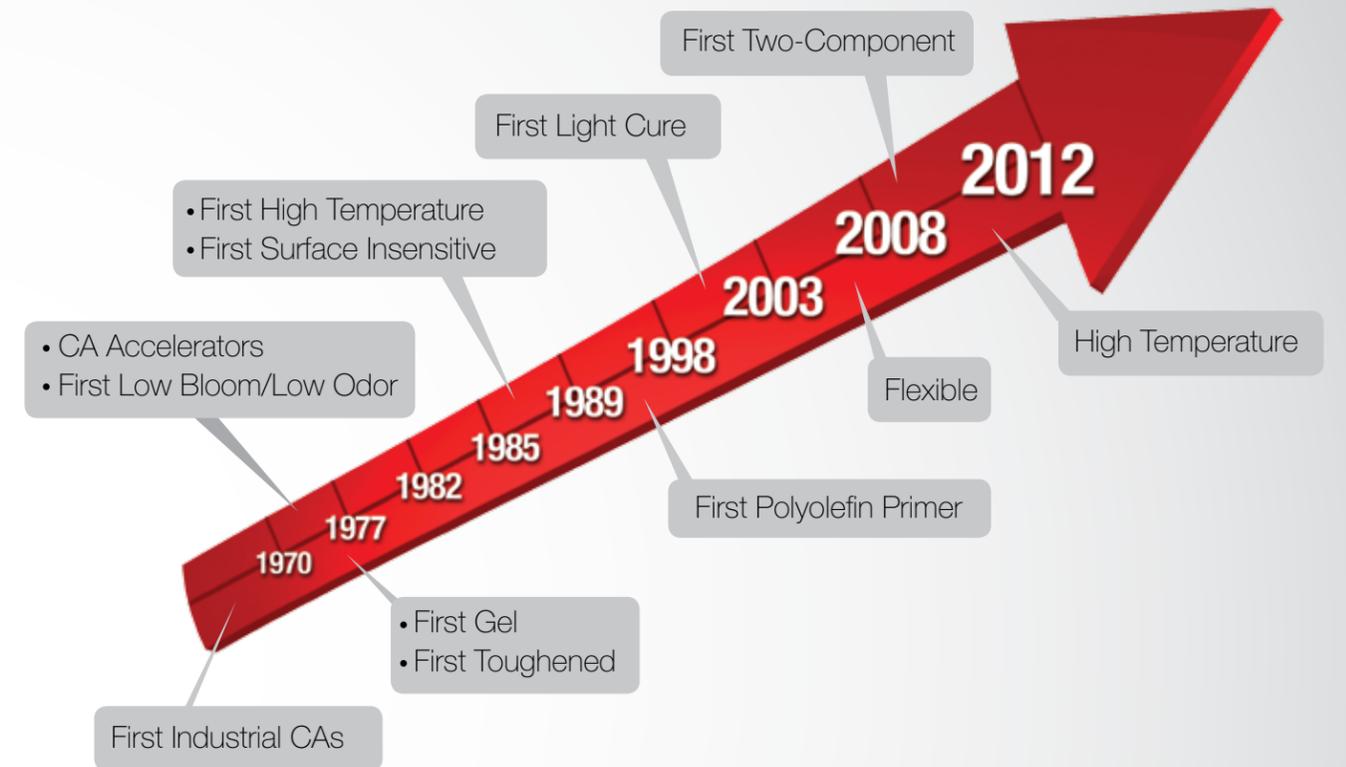
Rapidly emerging, innovative processes and materials mandate an unprecedented breadth and depth of engineering savvy. Not every company can provide the equipment and engineering staff necessary to compete in today's

marketplace the way Henkel can. Henkel's Engineering Services Group understands the necessity of partnering with manufacturers and sharing this expertise with the industry.

From design and product development to simulated testing of the manufacturing process and dispensing trials, Henkel brings a wealth of expertise and experience to its customers. In a design-through-assembly partnership, no one adds value like Henkel.

History of Henkel Innovation

Cyanoacrylate Adhesives



Instant Adhesives FAQ

How do conventional CAs cure? Cyanoacrylate adhesives are acrylic resins that polymerize or cure rapidly when exposed to alkali surfaces. Water, which is found in trace amounts on virtually all surfaces, contains hydroxyl ions which are alkaline and thus trigger rapid polymerization, whereby CA molecules link up to form a very strong and durable thermoplastic material. CAs reach fixture strength, or the strength where assemblies can be handled without falling apart, very quickly—typically in 5 to 20 seconds depending on the assembly. CAs reach their full strength in 24 hours, often attaining levels of 2,000 to 3,500 psi depending on the materials bonded. Very dry or acidic surfaces can also be bonded using Loctite® “Surface Insensitive” cyanoacrylate products. Cyanoacrylate adhesives that do not contact a surface, but are left in open air, will cure due to atmospheric moisture, but very slowly. To quickly cure CA

exposed to open air, either spray on an accelerator, or use a two-part CA.

How do light cure CAs cure? Light-curing cyanoacrylates are uniquely versatile as they offer the benefits of a conventional cyanoacrylate as well as the benefits of a light cure adhesive. These products will cure as described above, typically reaching fixture strengths in 5-20 seconds. They can also reach fixture strengths in 2-5 seconds with the introduction of the proper light source. Light cure CAs contain additives called photoinitiators which react when exposed to light of the proper wavelength and intensity to initiate the polymerization process extremely rapidly. Light that reaches the adhesive, either through a transparent substrate or an exposed bond line, allows components to be tacked together literally in a few seconds, followed by

the continued curing of the CA in the shadowed area of the bond line in 5 to 20 seconds via the conventional surface moisture curing mechanism. Light curing cyanoacrylate adhesives offer unique performance benefits for high-speed assembly processes. By rapidly curing exposed and confined adhesive without requiring the use of heat or racking of parts, light cure cyanoacrylates process quickly, are easy to use and are reliable.

What is blooming? Blooming is a phenomenon unique to cyanoacrylates that manifests itself as a rainbow haze or whitish haze surrounding a bond line. Un-reacted cyanoacrylate molecules can leave the surface of the dispensed adhesive and become airborne, only to later fall back onto the surface of the substrate. When they land, the molecules react with surface moisture and adhere themselves to the substrate. This small concen-

tration of cyanoacrylate particles on the surface can be diffracted by light causing the rainbow effect, while higher concentrations can result in a whitish haze on the substrate. A number of options exist to minimize or eliminate blooming as listed:

- Use low odor/low bloom products
- Avoid large fillets
- Increase air flow
- Avoid acidic surfaces
- Avoid extremes in relative humidity
- Avoid extremes in temperature
- Avoid vacuum environments
- Avoid the use of old material

