

RITE-LOK™

Cyanoacrylate, Anaerobic, UV-Curing,
and Structural Acrylic Adhesives



Selection Guide

3M

Now more than ever, the right 3M adhesive for the job

Designers and engineers increasingly rely on adhesives for improved end use performance, greater design flexibility, and more efficiency in putting their products together.

Backed with more than 50 years experience, 3M continues to meet that demand with an enhanced and growing line of products that help customers more

readily match the right adhesive to a specific job.

The latest expansion is the addition of Rite-Lok™ Industrial Adhesives. The added cyanoacrylate, anaerobic, UV-curing, and structural acrylic formulations expand the 3M job-matched options for substrate combinations, productivity, bond reliability, and cost-effectiveness.

Rite-Lok™ Cyanoacrylate Adhesives..... Page 5



Known as instant adhesives, these liquid and gel formulations cure in seconds to bond many substrates. The line includes low bloom, low odor formulations, high temperature performance, and unique rubber-toughened formulations for impact resistance.

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Rite-Lok™ Anaerobic Adhesives..... Page 17



For threadlocking, retaining, gasketing, and sealing, anaerobic adhesives cure to a tough plastic in the absence of oxygen and in the presence of metal. Select from a range of viscosities, chemical properties, and break and prevailing strengths.

Rite-Lok™ UV-Curing Adhesives..... Page 25



When exposed to UV light, these adhesives cure in seconds to a tough, clear plastic for bonding, potting, wire terminating, encapsulating, and coating. Bond glass, metal, thermoset and thermoplastic plastics, and more.

Rite-Lok™ Structural Acrylic Adhesives..... Page 27



These 2-step structural acrylic adhesives bond a wide variety of substrate combinations: metal to stone, metal to metal, and plastics to themselves. Simply apply adhesive to one surface and activator to the other to save the surface prep time of epoxies.

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Rite-Lok™ Cyanoacrylate Adhesives Product Selection

	Low Odor	High Temperature	Rubber Toughened	Surface Insensitive	General Purpose	Engineered Grade	Super Fast	Flexible	Metal Bonder	Ethyl Based
Operating Conditions		SB98								
			PR80							
			PR80					PR851		
Unique properties	Bonding "Up Close" or in Confined Space	LO100								
	Eliminate Blooming or Cosmetic Critical	LO100			SB14 w/ AC113					
Substrates	Wood, Leather, Fabric or Acidic Surfaces			SI1500			SF100			
	Metal to Metal or Plated Surfaces				SB14				SB30	
	EPDM, Viton, Santoprene, Nylon, Acetal					PR600	SF100			
	Dirty, Oily or Contaminated Surfaces			SI1500			SF100			
Substrates	LSE plastics					PR600 w/ Primer AC77	SF100 w/ Primer AC77			
	General Bonding-Metal Plastics and Rubbers				SB14					EC100
	Treated metals to dissimilar substrates								SB30	
Process time	General Purpose gap filling /vertical applications (all substrates)			PR54						
	Fast Cure and some Impact, Flex, Peel							PR851		
Process time	High Speed Automated Dispensing					PR600	SF100			
	Extra positioning time (slower curing)									EC100

Primary

Secondary

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Super Fast Cyanoacrylate Adhesives



Properties

- Super fast cure for high speed production
- Exceptional performance on difficult-to-bond plastics and rubbers; acidic surfaces such as wood, leather, cardboard, and oily surfaces

Markets/Application Ideas

- Automotive
- Leather working
- Electronics
- Appliance
- Hand tools
- Power tools

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
SF20	Optimum performance on wide range of rubber and plastic	Clear	Ethyl Hybrid	20	-65° to 180°F (-54° to 82°C)	3-30 sec.	24
SF100	Fast cure, high strength with EPDM and other elastomers			100		3-30 sec.	

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Low Odor Cyanoacrylate Adhesives



Properties

- Low blooming/frosting for visual appeal; eliminates chlorosis (white residue at the joint)
- Reduces need for sophisticated ventilation equipment

Markets/Application Ideas

- Cosmetic cases
- Black substrates
- Close-up bonding
- Appearance-critical applications

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
LO5	Very low viscosity wicking grade	Clear	Methoxyethyl	5	-65° to 160°F (-54° to 71°C)	5-60 sec.	24
LO100	Low-medium viscosity for close fitting parts			100		10-60 sec.	
PR03	Medium-high viscosity for gap filling			1000		20-70 sec.	

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Rubber-Toughened Cyanoacrylate Adhesives



Properties

- Unique elastomer maximizes resistance to impact, peel, and thermal cycling
- Flexible bond lines for bonding flexible and dissimilar substrates

Markets/Application Ideas

- Automotive
- Electric motors
- Electronics
- Appliance
- Hand tools
- Power tools

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
PR80	Low viscosity for close fitting parts	Black	Ethyl Hybrid	300	Continuous -65° to 200°F (-54° to 93°C)	20-50 sec.	24
PR10	High viscosity for gap filling			3500	Intermittent -65° to 225°F (-54° to 107°C)	20-90 sec.	

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Flexible Cyanoacrylate Adhesives



Properties

- Extended resistance to impact, vibration, stress, peel, and humidity
- Faster curing than rubber-toughened

Markets/Application Ideas

- Automotive
- Appliance
- Electronics
- Hand tools
- Power tools

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
PR851	Medium viscosity with some gap filling	Clear	Ethyl Hybrid	300	-65° to 160°F (-54° to 71°C)	10-35 sec.	24

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High Temperature Cyanoacrylate Adhesives



Properties

- Superior resistance to high temperature, thermal cycling and shock is required

Markets/Application Ideas

- Appliance
- Electronics
- Electric Motors
- Automotive
- Transformers

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
HT40	Low viscosity for close fitting parts	Clear	Ethyl Hybrid	40	Continuous -65° to 223°F (-54° to 106°C) Intermittent -65° to 250°F (-54° to 121°C)	5-20 sec.	24
SB98	Medium viscosity with some gap filling			500	Continuous -65° to 210°F (-54° to 99°C) Intermittent -65° to 250°F (-54° to 121°C)	15-40 sec.	
HT700	Medium viscosity with some gap filling			700	Same as HT40	15-40 sec.	

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Engineered Grade Cyanoacrylate Adhesives



Properties

- Exceptional performance on difficult-to-bond plastics and rubbers, together or in combination with metals and/or composites
- Superior performance on PVC, ABS, nylon, EPDM, Santoprene, and Viton

Markets/Application Ideas

- Automotive
- Appliance
- Electronics
- Hand tools
- Power tools

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
PR5	Very low viscosity wicking grade for plastics/rubbers	Clear	Ethyl Hybrid	5	-65° to 180°F (-54° to 82°C)	1-10 sec.	24
PR40	Low viscosity for close fitting plastics/rubber parts			40		3-20 sec.	
SB04	General purpose, low viscosity standard rubber bonder			100		10-30 sec.	

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Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
SB14	General purpose, low viscosity plastic bonder	Clear	Ethyl Hybrid	100	-65° to 180°F (-54° to 82°C)	10-30 sec.	24
PR600	Medium viscosity with some gap filling for plastics/rubbers			600		4-25 sec.	
PR1500	High viscosity for gap filling with plastics/rubbers			1500		20-100 sec.	
SB16	General purpose, high viscosity for gap filling			1500		20-100 sec.	
PR54	Fast cure, gel viscosity for max gap filling			Gel		3-60 sec.	

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Metal Cyanoacrylate Adhesives



Properties

- Optimum performance and high strength bonds on metal to metal
- Bond galvanized, anodized, and other difficult-to-bond metals
- Two standard viscosities

Markets/Application Ideas

- Costume Jewelry
- Treated Metals
- Plated Metals
- Metal Working

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
SB93	Low viscosity to penetrate between parts	Clear	Methyl	5	-65° to 180°F (-54° to 82°C)	15-35 sec.	24
MC100	Multi-purpose metal bonder			100		5-20 sec.	
SB30	Multi-purpose metal bonder			100		5-20 sec.	

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Surface Insensitive Cyanoacrylate Adhesives



Properties

- Bond rough, porous, contaminated and acidic substrates where other cyanoacrylates fail
- Cure fast at low humidity

Markets/Application Ideas

- Woodworking
- Luggage & Fabric
- Hobby
- Costume Jewelry
- Leather

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
SB20	Very low viscosity wicking grade	Clear	Ethyl Hybrid	2	-65° to 180°F (-54° to 82°C)	15-35 sec.	24
SB95	Low viscosity for close fitting parts			40		2-20 sec.	
SI100	Low-med viscosity for medium gaps			100		3-20 sec.	
SI1500	High viscosity for gap filling			1500		5-60 sec.	
SI2500	Very high viscosity for gap filling			2500		15-40 sec.	
SB22	Very high viscosity for gap filling			2500		15-40 sec.	
SB09	Fast cure, gel viscosity for max gap filling			Gel		3-60 sec.	

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General Purpose Cyanoacrylate Adhesives



Properties

- Bond a wide variety of substrates
- Available in wide variety of viscosities
- Slower curing

Markets/Application Ideas

- Automotive
- General Bonding
- Consumer Products
- Toys
- Rubber/Plastic Assembly

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
EC5	Very fast cure for pre-assembled parts	Clear	Ethyl	5	-65° to 180°F (-54° to 82°C)	5-15 sec.	24
EC40	General purpose, fast curing			40		10-30 sec.	
EC100	General purpose, fast curing			100		10-40 sec.	
EC600	Higher viscosity to reduce migration from bond area			600		5-60 sec..	

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Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
EC1500	Slower cure for porous materials or gap filling	Clear	Ethyl	1500	-65° to 180°F (-54° to 82°C)	20-60 sec.	24
EC2500	Slow cure for porous material or gap filling			2500		20-60 sec.	
ECIGEL	Industrial strength thixotropic gel for maximum gap filling			Gel		45-180 sec.	

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Cyanoacrylate Primers, Activators, and Debonders



Product	Typical Use
AC12	Cyanoacrylate accelerator with isopropyl alcohol formulation for insensitive plastics, cosmetically critical bond lines, and medical applications
AC68	Cyanoacrylate debonder for clean up
AC77	Cyanoacrylate polyolefin primer for very fast bonding of difficult-to-bond polyethylene and polypropylene
AC113	Cyanoacrylate general purpose accelerator will not attack plastics
AC452	Cyanoacrylate acetone-based accelerator flashes off rapidly; excellent adhesion; overspray may attack some plastics.

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Rite-Lok™ Anaerobic Adhesives

Threadlocker Anaerobic Adhesives



Properties

- Prevent vibration loosening
- Seal against leakage and corrosion
- Replaces wide variety of traditional and sometimes ineffective vibration proofing methods, reducing cost and increasing performance

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
TL22	Screwlock – Low removal torque for small fasteners less than a 1/4" (6mm) (HTR*)	Purple	1200	-65° to 300°F (-54° to 149°C)	< 20 min.	24
TL42	Nutlock – Medium strength, general purpose (HTR*)	Blue	1200		< 20 min.	

* Hand tool for removal

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Threadlocker Anaerobic Adhesives (continued)

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
TL43	Oil tolerant, medium strength general purpose (HTR*)	Blue	3300	-65° to 300°F (-54° to 149°C)	< 20 min.	24
TL62	Studlock – High strength with controlled torque tension (HHR**)	Red	1600			
TL71	Permanent studlock for bolts and studs up to 1" (25mm) (HHR**)		500			
TL72	High temperature studlock with gap filling for larger diameter coarse threaded parts (HHR**)		7000	-65° to 450°F (-54° to 232°C)		
TL77	Heavy duty permanent for fasteners up to 1.5" (38mm) with coarse threads (HHR**)		7000	-65° to 300°F (-54° to 149°C)	< 60 min.	
TL90	Penetrating adhesive for pre-assembled fasteners and porosity sealing of welds (HHR**)	Green	20	-65° to 300°F (-54° to 149°C)	< 20 min.	

* Hand tool for removal

** Heat and hand tool for removal

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Pipe Sealant Anaerobic Adhesives



Properties

- Replace traditional PTFE tapes and dope for thread and pipe sealing
- Seal instantly and will not shred, evaporate, or shrink
- Resist pressure, vibration and temperature cycling, hydraulic fluids, chemicals, oil, fuel, and lubricants

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Seal to Operating Pressure (hours)
HP45	High pressure sealant for all hydraulic and pneumatic fittings; will not clog valve or filters	Purple	14,000	-65° to 300°F (-54° to 149°C)	4
HP54	Refrigerant sealant with excellent chemical resistance	Red	2500		
HP69	High pressure sealant for all fine threaded hydraulic and pneumatic fittings	Brown	500		

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Pipe Sealant Anaerobic Adhesives (continued)

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Seal to Operating Pressure (hours)
PS65	General purpose for applications requiring easy disassembly	White	Paste	-65° to 400°F (-54° to 204°C)	4
PS67	Fast curing paste sealant for inactive surfaces such as stainless steel		Paste		
PS92	High temperature for sealing tapered and parallel threaded components		Paste		

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Retaining Compound Anaerobic Adhesives



Properties

- Used in the assembly of coaxial components such as bearings, gears, shafts bushes, pulleys, cylinder liners and rotors
- Increase load bearing characteristics of cylindrical joints, reducing assembly stresses, assembly costs and preventing fretting and corrosion

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
RT09	For tight tolerances and press fit augmentation	Green	125	-65° to 300°F (-54° to 149°C)	10-30 min.	24
RT20	For assembly of automotive/marine cylinder liners and heat exchanger tubes		7000	-65° to 450° F (-54° to 232°C)	30-40 min.	
RT35*	High strength for slip fits		2000	-65° to 300°F (-54° to 149°C)	10-60 min.	
RT40*	Secures all types and sizes of bearings, shafts and cylindrical parts		600	-65° to 400°F (-54° to 204°C)	10-15 min.	

*Made to order

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Retaining Compound Anaerobic Adhesives (continued)

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)
RT41	Medium strength for disassembly for service and bearing re-use	Tan	600	-65° to 300°F (-54° to 149°C)	15-20 min.	24
RT60	High strength, high viscosity paste	Grey	Paste		10-30 min.	
RT80	High strength, high viscosity to bond rigid assemblies	Green	1600		5-15 min.	
RT142	Seal core plugs in engines or assembly or repair of loose-fitting parts	Blue	10,000		5-15 min.	

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Gasket Maker Anaerobic Adhesives



Properties

- Create formed-in-place gaskets on flanges and housings to eliminates need for large inventories of pre-cut gaskets
- Will not relax or shrink
- Exceptional pressure and solvent resistance

Product	Typical Use	Color	Typical Viscosity (cps)	Temperature Range	Cured Speed Unprimed (Primed)	Cured State
GM04	Instant low pressure seal for gaps to .030"	Orange	Paste	-65° to 300°F (-54° to 149°C)	4 -24 hrs. . (30 min.- 4 hrs.)	Rigid
GM10	Making or dressing gaskets in rigid assemblies; can be screen printed; high temperature resistance	Red	Paste			
GM15	General purpose; flexible to withstand vibration	Purple	Paste	-65° to 300°F (-54° to 149°C)	1-12 hrs. (15 min.-2 hrs)	Flexible
GM18	Instant low pressure seal without a primer on mating aluminum flanges	Red	Paste		4-24 hrs. (30 min.- 4 hrs)	

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Anaerobic Adhesives Primers



Product	Typical Use
AC471	Fast-acting surface cleaner and primer for use with all anaerobic adhesives; seven day part life for pre-application
AC649	Acetone-based green primer for inactive or very cold surfaces; 30 day part life for pre-application

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Rite-Lok™ UV-Curing Adhesives

UV-Curing Adhesives



Properties

- Cures to high strength when exposed to UV light of 200-400 nm wavelength

Product	Typical Use	Color	Typical Viscosity (cps)	Cure Time	Depth of Cure
UV107	Very high strength on PVC and polycarbonate	Clear	250	< 5 second	2 mm
UV175	Fast curing, high strength bonding of glass to metal; coating		3000	< 1 second	3-5 mm

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Note: This technical information and data should be considered representative or typical only and should not be used for specification purposes.

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UV-Curing Adhesives (continued)

Product	Typical Use	Color	Typical Viscosity (cps)	Cure Time	Depth of Cure
UV525	High shear strength on glass and metal for lead crystal and general purpose bonding	Pale Yellow	7000	< 1 second	2 mm
UV912	High shear strength on glass and metal for lead crystal and general glass bonding				

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Rite-Lok™ Structural Acrylic Adhesives

Structural Acrylic Adhesives



Properties

- Simple, no-mix application for high speed production
- Adhesive applied to one surface, activator sprayed or brushed on other; cure begins when the two surfaces are assembled

Product	Typical Use	Color	Chemical Type	Typical Viscosity (cps)	Temperature Range	Time to Handling	Full cure (hours)	Activator
SA24	Impact resistant for a wide variety of dissimilar substrates	Amber	Acrylic	15,000	-65° to 275°F (-54° to 135°C)	3 min.	24	AC380D
SA30	High viscosity with superior peel and impact strength	Straw		22,000	-65° to 250°F (-54° to 121°C)	5 min.		
AC380D	Structural adhesive activator; solventless, non-flammable for use with SA24 or SA30							

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