

3M™ Scotch-Weld™ Cyanoacrylate Adhesives

3M™ Scotch-Weld™ Anaerobic Adhesives



Product & Solution Guide



3M™ can offer the right adhesive for the job!

Designers and engineers increasingly rely on adhesives for improved end user performance, greater design flexibility and more efficient assembly.

Backed by more than 50 years of experience, 3M continues to meet demand with an enhanced and growing line of products that help customers readily match the right adhesive to a specific job.

3M Scotch-Weld™ cyanoacrylate and anaerobic adhesives expand 3M's job-matched options for substrate combinations, productivity, bond reliability and cost effectiveness.

3M™ Scotch-Weld™ Cyanoacrylate Adhesives

Instant adhesives

Scotch-Weld Cyanoacrylate Adhesives are high specification, single component adhesives. They form high tensile bonds to metal, plastic, ceramic, wood, rubber and composites.

- Plastic and Rubber (PR) grades approved for use on medical devices
- Surface insensitive formulations
- High viscosity grades for gap filling
- Low odour and low bloom formulation

Note: Full cure time 24 hours



3M™ Scotch-Weld™ Anaerobic Adhesives

Securing and sealing against leaks

Scotch-Weld Anaerobic Adhesives are single component engineering adhesives that cure in the absence of air and in the presence of metal. Products are available for threadsealing, threadlocking, pipe and hydraulic joint sealing, retaining of cylindrical parts and gasketing.

- Excellent vibration resistance
- Excellent fluid resistance
- High temperature grades available
- Wide range of strengths and viscosities
- Prevent leakage and corrosion

Note: Full cure time 24 hours











3M™ Scotch-Weld™ Cyanoacrylate Adhesives

3M™ Scotch-Weld Cyanoacrylate Adhesives enable rapid bonding of many substrates and ensure high strength joints and clear bond lines, all in a matter of seconds.

- Instant bond
- Low odour and low bloom products available
- High-performance
- Ideal for low surface energy materials
- Clear bond lines
- Bonds a wide variety of materials
- A range of viscosities available to suit different applications

Note: Product coding letters relate to product type and numbers relate to viscosity (cps) - please see table below for details.

<p>Super Fast SF20, SF100</p> <ul style="list-style-type: none"> • Very fast-curing cyanoacrylate adhesive • Suitable for bonding a wide range of materials including acidic surfaces • Formulated for the bonding of plastics, rubbers, paper, leather and metals 	<p>General Purpose EC1500</p> <ul style="list-style-type: none"> • High-strength • Particularly high-bond strength on metals • High viscosity for bonding porous materials or where gap filling is required 	<p>Extra Fast XF100</p> <ul style="list-style-type: none"> • Very fast-curing adhesive • Medium viscosity • Formulated for instant bonding of paper, leather, wood, plastics, rubbers and metals 	<p>Rubber Toughened RT300B</p> <ul style="list-style-type: none"> • Rubber-toughened adhesive • Provides a more flexible bond than standard cyanoacrylates • Displays excellent peel and impact strength • Well-suited to applications which experience vibration, thermal shock, temperature variation, cycling and high humidity 
<p>Low Odour L0100</p> <ul style="list-style-type: none"> • Low-odour, low bloom adhesive • Used for applications where cosmetic appearance is important • Will not attack low-density foams such as expanded polystyrene 	<p>Surface Insensitive SIGEL</p> <ul style="list-style-type: none"> • Designed for high-strength applications • Multi-purpose adhesive for bonding plastics, rubbers, wood, leather and metals • Thick gel formulation for porous surfaces and maximum gap filling 	<p>Plastics and Rubber PR20, PR100</p> <ul style="list-style-type: none"> • High-strength, multi-purpose bonding of most plastics and rubbers • Can bond difficult -to-bond, plastics such as polypropylene, polyethylene, PTFE and thermoplastic rubbers • USP Class VI approval for use in medical devices 	<p>Cyanoacrylate Primer AC11, AC77</p> <ul style="list-style-type: none"> • AC11 Activator provides instant curing with cyanoacrylate adhesive. Suitable with slower curing, high viscosity grades • AC77 Primer for bonding to low surface energy materials, such as polyethylene, polypropylene, silicone rubber and PTFE 

ADHESIVE	PRODUCT COLOUR	VISCOSITY	GAP FILL	TEMP RANGE	FIXTURE TIME
SF20	Clear	20cps	0.10mm	-50°C to 80°C	3s to 30s
SF100	Clear	90cps	0.15mm	-50°C to 80°C	3s to 30s
XF100	Clear	100cps	0.15mm	-50°C to 80°C	1s to 30s
L0100	Clear	100cps	0.15mm	-50°C to 80°C	10s to 60s
PR20	Clear	20cps	0.10mm	-50°C to 80°C	2s to 20s
PR100	Clear	100cps	0.15mm	-50°C to 80°C	10s to 30s
EC1500	Clear	1500cps	0.20mm	-50°C to 80°C	20s to 60s
RT300B	Black	600cps	0.20mm	-50°C to 105°C	5s to 50s
SIGEL	Clear	Gel	0.50mm	-50°C to 80°C	3s to 60s
PRIMER	PRODUCT COLOUR	VISCOSITY	BASIS	FLASH-OFF TIME	FLASHPOINT
AC11	Clear	1cps	Hydrocarbon Solvent	30s	<15°C
AC77	Clear	1cps	Heptane	30s	1°C

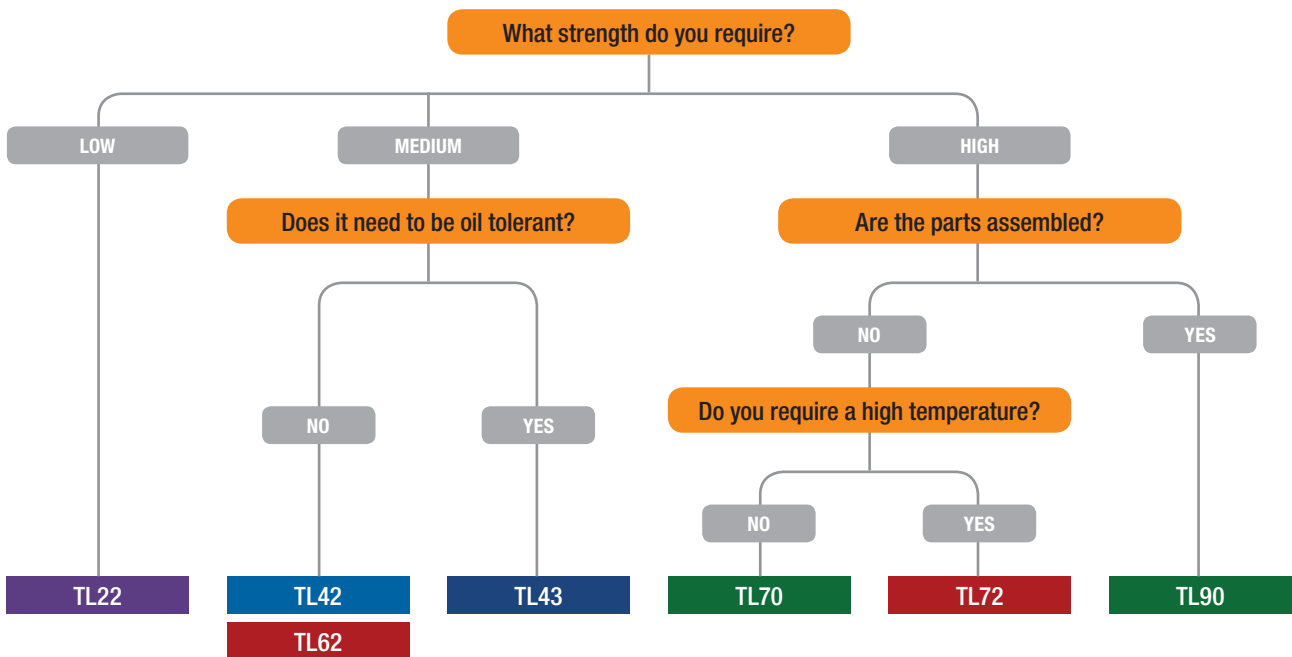
3M™ Scotch-Weld™ Anaerobic Adhesives

3M™ Scotch-Weld™ Threadlockers

With a wide range of strengths and viscosities allowing use across a broad spectrum of general engineering and automotive applications, Scotch-Weld Threadlockers readily meet the needs of OEM assembly, maintenance, upgrade and overhaul projects.

- Fill gaps between mating metal threads preventing vibration loosening
- Seals against leakage and corrosion
- Excellent fluid resistance
- Replaces traditional mechanical methods such as locks, washers, split pins, Nylok nuts and wiring thus reducing weight, inventory and cost
- Single component (no mixing)
- Easy to apply

Which threadlocking product do I need?



3M™ Threadlockers

TL22	TL42	TL43	TL62
<ul style="list-style-type: none"> • Screwlock • Low-strength thixotropic compound • Low removal torque allows easy disassembly • Used with light fasteners • Recommended for use on softer, non-ferrous metals e.g. brass 	<ul style="list-style-type: none"> • Nutlock • Medium-strength thixotropic compound • General purpose threadlocker • Can fill gaps up to 0.25mm • For use where disassembly with hand tools for servicing is required 	<ul style="list-style-type: none"> • Nutlock • Oil-tolerant • Medium-strength thixotropic compound • General purpose threadlocker • Typically used on mounting bolts and housing screws 	<ul style="list-style-type: none"> • Studlock • High-strength • Prevents corrosion of assembled parts • Can fill gaps up to 0.25mm • Suitable for applications requiring high strength but not maximum strength
TL70	TL72	TL90	
<ul style="list-style-type: none"> • Studlock • High-strength • Used for permanent threadlocking applications • Suitable for larger threaded fasteners e.g. studs 	<ul style="list-style-type: none"> • Studlock • High service temperature up to 230°C • High-viscosity thixotropic product prevents run-off. Dripping and migration post-assembly • Gap filling for larger diameter threaded parts 	<ul style="list-style-type: none"> • High-strength • Penetrating adhesive • Very low viscosity • Applied to pre-assembled parts • Can be used as a porosity sealant for cast components 	

THREADLOCKER	PRODUCT COLOUR	VISCOSITY	BREAKAWAY TORQUE / PREVAIL TORQUE ISO 10964	GAP FILL	FIXTURE TIME	SERVICE TEMPERATURE RANGE
TL22	Purple	at 2.5rpm 4,000cps–6,000cps ¹ , at 20rpm 1,000cps–2,000cps ¹	8Nm / 3Nm	0.25mm	15min	-50°C to +150°C
TL42	Blue	at 2.5rpm 4,000cps–6,000cps ¹ , at 20rpm 1,000cps–2,000cps ¹	15Nm / 7Nm	0.25mm	15min	-50°C to +150°C
TL43	Blue	at 2.5rpm 10,000cps–18,000cps ¹ , at 20rpm 2,500cps–4,000cps ¹	19Nm / 10Nm	0.30mm	15min	-50°C to +150°C
TL62	Red	at 2.5rpm 5,500cps–8,500cps ¹ , at 20rpm 1,000cps–3,000cps ¹	25Nm / 25Nm	0.25mm	15min	-50°C to +150°C
TL70	Green	400cps–600cps	29Nm / 33Nm	0.20mm	15min	-50°C to +150°C
TL72	Red	at 2.5rpm 15,000cps–30,000cps ² , at 20rpm 5,000cps–10,000cps ²	26Nm / 26Nm	0.30mm	15min	-50°C to +230°C
TL90	Green	7cps–12cps	16Nm / 34Nm	0.15mm	15min	-50°C to +150°C

Note: ¹ Brookfield RVT Spindle 2 ² Brookfield RTF Spindle 4

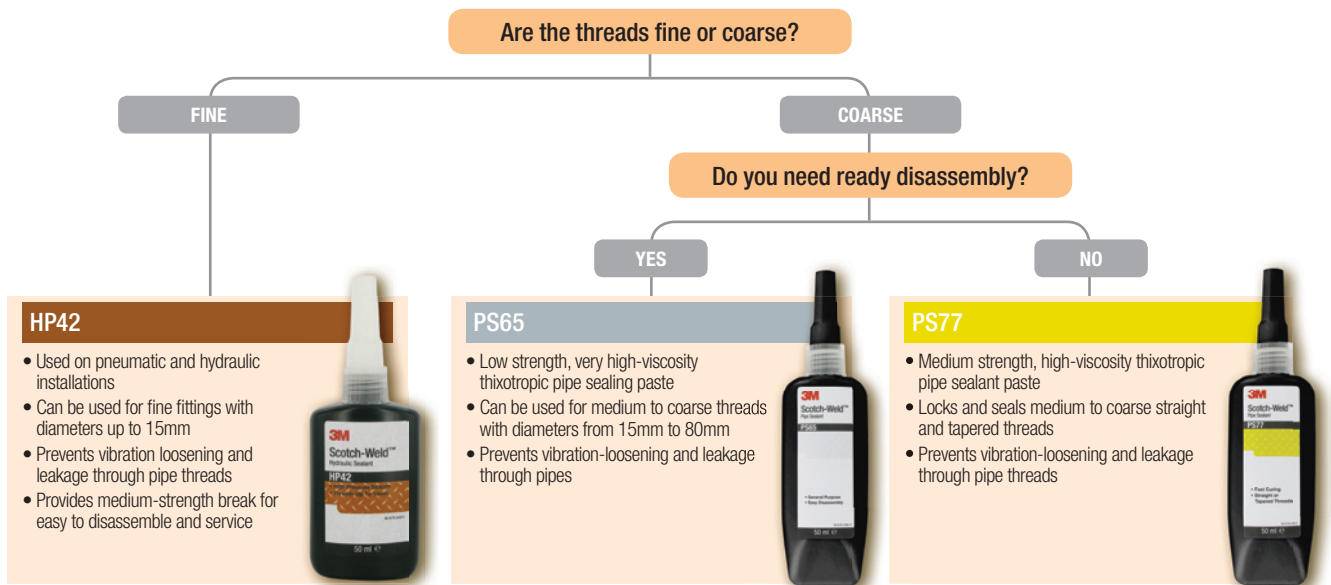


3M™ Scotch-Weld™ Pipe Sealants

Allowing easy disassembly even over long time periods, Scotch-Weld Pipe Sealants are formulated to seal pipe threads preventing the escape of gaseous and liquid materials such as water, oil and gas.

- Replaces PTFE tape
- Single component (no mixing)
- Provides low cost joints that do not shred
- Solvent free
- Provides an instant low pressure seal
- Easy disassembly even after long periods

Which pipe sealant product do I need?

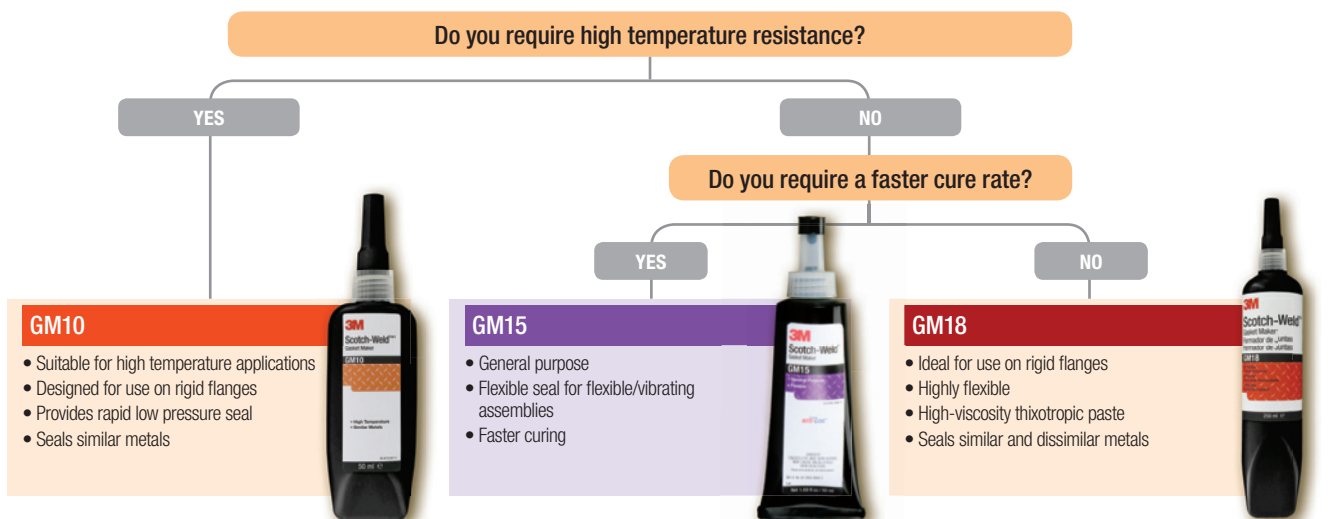


3M™ Scotch-Weld™ Gasket Makers

Ideal for creating a reliable join between two mounted flanges or surfaces, Scotch-Weld Gasket Makers provide a durable, flexible and temperature resistant seal.

- Eliminates the need for pre-cut gaskets, reducing weight, inventory and cost
- Provides excellent instant seal
- For use on water, oil and fuel pumps, electric motor and covers, compressors, thermostat housing and most machined metal faces
- Will not contaminate hydraulic and pneumatic systems
- Does not shrink, crack, sag or run
- Fills surface imperfections, reducing machining costs
- Single component (no mixing)

Which gasket maker product do I need?

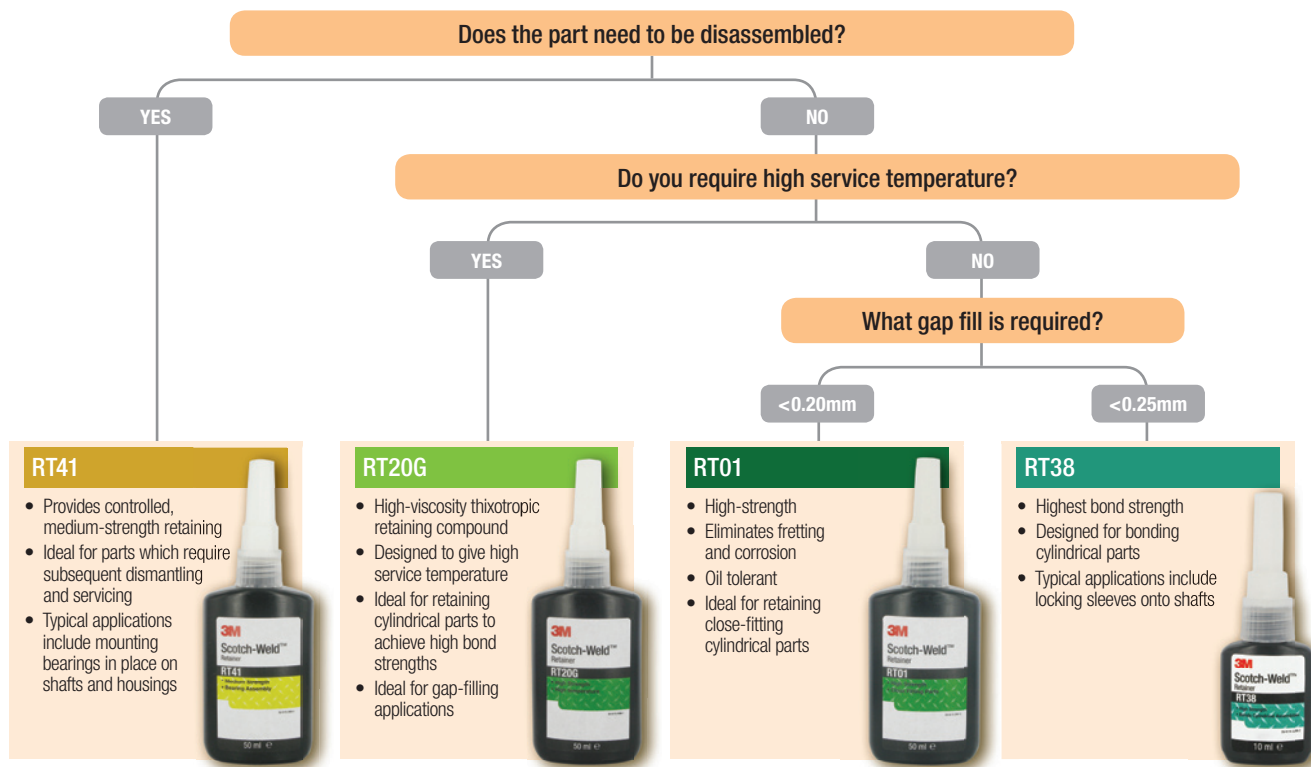


3M™ Scotch-Weld™ Retaining Compounds

Available in high temperature grades and easily dispensed manually or automatically, Scotch-Weld Retaining Compounds are ideal for bonding parts such as bearings, shafts, hubs and bolts.

- Increases the load bearing characteristics of cylindrical joints
- Reduces assembly stresses
- Range of strengths and viscosities to meet demanding engineering specifications
- Single component (no mixing)
- Prevents corrosion and eliminates fretting
- Provides 100% contact, filling all voids

Which retainer product do I need?



PRODUCTS	COLOUR	VISCOSITY	BREAKAWAY TORQUE / PREVAIL TORQUE ISO 10964	SHEAR STRENGTH ISO 10123	GAP FILL	FIXTURE TIME	SERVICE TEMPERATURE RANGE
HP42	Brown	at 2.5rpm ¹ 400cps-600cps ¹	13Nm/10Nm	-	0.20mm	15min	-50°C to +150°C
PS65	White	at 2.5rpm 150,000cps-450,000cps ² , at 20rpm 30,000cps-130,000cps	3.5Nm/1.5Nm	-	0.50mm	≤ 120min	-50°C to +150°C
PS77	Fluorescent yellow	at 2.5rpm 35,000cps-60,000cps ³ , at 20rpm 10,000cps-20,000cps ³	16Nm/4.5Nm	-	0.25mm	≤ 15min	-50°C to +150°C
GM10	Red-orange	at 2.5rpm 250,000cps-600,000cps ² , at 20rpm 40,000cps-80,000cps ²	-	-	0.50mm	20min	-50°C to +200°C
GM15	Purple	at 2.5rpm 150,000cps-500,000cps ²	-	-	0.50mm	35min	-50°C to -150°C
GM18	Red	at 2.5rpm 300,000cps-700,000cps ² , at 20rpm 75,000cps-150,000cps ²	-	-	0.50mm	35min	-50°C to +150°C
RT01	Green	100cps-150cps	32Nm/34Nm	12-26 MPa	0.20mm	15min	-50°C to +150°C
RT20G	Yellow/green	at 2.5rpm 10,000cps-30,000cps ⁴ , at 20rpm 5,000cps-10,000cps ⁴	34Nm/32Nm	11-28 MPa	0.40mm	15min	-50°C to +230°C
RT38	Green	1,800cps-3,300cps	30Nm/32Nm	11-37 MPa	0.25mm	≤ 15min	-50°C to +150°C
RT41	Yellow/brown	400cps-600cps	15Nm/10Nm	-	0.20mm	15min	-50°C to +150°C

Note: ¹ Brookfield LVF, Spindle 2 ² Brookfield RVT, T Spindle D ³ Brookfield RVT, T Spindle 5 ⁴ Brookfield RVT, Spindle 4

AC64

- Rapid-cure activator for use with anaerobic adhesives.
- Recommended for use with passive metals e.g. stainless steel
- Used for low-temperature bonding applications



PRODUCT	BASIS	COLOUR	VISCOSITY	FLASH-OFF TIME	ON PART LIFE	FLASHPOINT
AC64	Hydrocarbon solvent base, copper salt	Pale green	0.50cps	15s	≤ 30days	-5°C



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Please note that the technical information and data provided within should be considered representative or typical only and should not be used for specification purposes. The user should evaluate the 3M product to determine whether it is fit for the user's particular purpose and method of application.