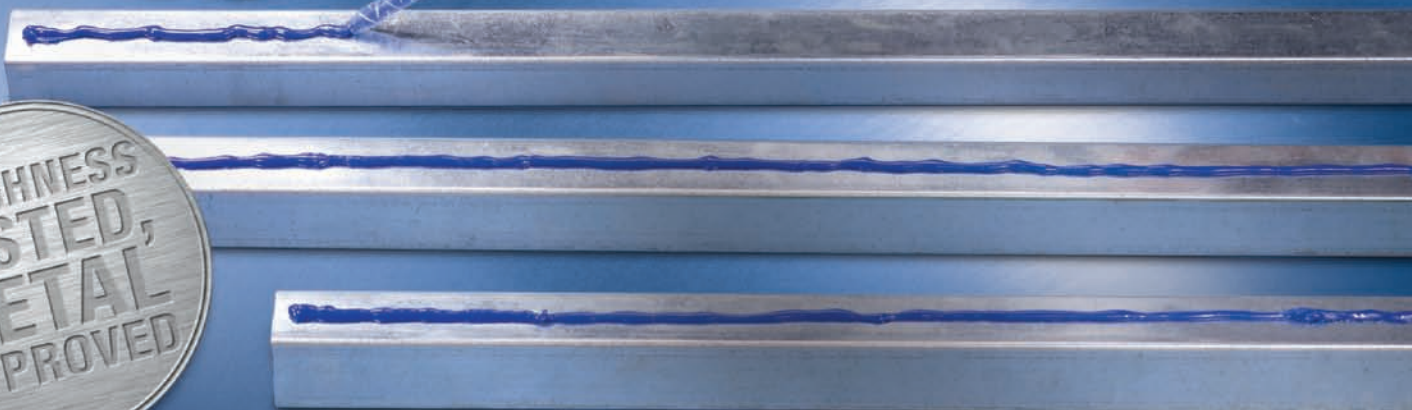


LOCTITE®

Speedbonder™ Structural Acrylic Adhesives

Specially Formulated Adhesives for
Structural Metal Bonding





Loctite® Speedbonder™ Structural Adhesives

Adhesives provide design advantages, improve overall product performance, speed assembly time, optimize production efficiency, increase quality, and reduce overall costs. Fabricators of metal components can realize these same benefits through the use of Loctite® Speedbonder™ structural acrylic adhesives.

For use in a variety of industrial assembly applications, Loctite® Speedbonder™ structural acrylic adhesives have been specially formulated to provide tough, durable bonds to a wide variety of metal surfaces.



Benefits include:

- Elimination or significant reduction of costly mechanical fastening methods such as rivets, screws, and welds
- Fast processing speeds
- Reduction in labor costs
- Tough, durable bond strengths on a variety of metal surfaces
- Excellent resistance to severe environmental conditions
- Improved aesthetics
- Bonds dissimilar materials, such as metal to plastic
- Minimal or no surface preparation required
- Fills large gaps between parts
- 100% solids – no solvents in the formulation
- Mixer friendly packaging

All Loctite® Speedbonder™ two-part structural acrylic adhesives are packaged in easy-to-use dual cartridges. When used with Loctite® dual cartridge dispensers and mix nozzles, Loctite® Speedbonder™ structural acrylic adhesives are as convenient to use as any one-part system. Loctite® Speedbonder™ two-part structural acrylic adhesives are also offered in 5 or 55-gallon pails for high volume and automated assembly operations.

Most importantly, Loctite® Speedbonder™ adhesives are backed by the industry's most trusted brand – Loctite®. A name synonymous with the highest quality, superior technical support, and the best overall value.

Specially Formulated Adhesives for Structural Metal Bonding

Typical Uses



Specialty Vehicles

Use Loctite® Speedbonder™ structural acrylic adhesives as a replacement for rivets, screws or welds to attach panels to specialty vehicles such as delivery vehicles, busses, and off-road construction equipment.



Signs & Displays

Loctite® Speedbonder™ structural acrylic adhesives are well suited for assembling signs that are constructed of metal components and exposed to outside elements.



Tub and Spas

With their ability to bond both metals and plastics, and withstand moist environments, Loctite® speedbonder™ structural acrylic adhesives are well suited for the assembly of various tub and spa components made of galvanized steel, fiberglass, aluminum, ABS, and more.



Structural Building Components

The use of Loctite® Speedbonder™ H8600™ Structural Adhesive with mechanical fasteners allows light gauge steel building component manufacturers to increase connection strengths while reducing assembly times by as much as 85% and overall costs as much as 65%. Ideal for the production of shear walls, trusses, windows, doors, beams, and more.



Machinery and Tooling

Providing tough and flexible bonds, Loctite® Speedbonder™ structural acrylic adhesives are well suited for the assembly of parts-handling equipment. Ideal for bonding flexible strips of metal and plastic guides, channels, and other materials used on automated assembly equipment.



Commercial Furniture

Loctite® Speedbonder™ structural acrylic adhesives are ideal for bonding the variety of materials used in the commercial furniture market, including large sheets of plain, painted or powder-coated metals and plastics.



Loctite® Speedbonder™ Structural Adhesives

Loctite® Speedbonder™ structural acrylic adhesives for metal bonding are available in two categories:

General Purpose – for excellent bond strength on a variety of metal surfaces.

High Performance – for the toughest, most durable bond strengths on specific materials, or resistance to extreme environmental conditions.



General Purpose

Loctite® H3151™ Speedbonder™ *PATENTED* Structural Adhesive

Long Open Time, 35-40 minutes

Extended open time allows for adjustment of parts.
Excellent bond strength on aluminum and steel.

Loctite® H4500™ Speedbonder™ Structural Adhesive

Short Open Time, 10 minutes

Fast setting, high strength structural adhesive for metals.

High Performance

Loctite® H4720™ Speedbonder™ Structural Adhesive

Extreme Environment

Provides excellent environmental resistance, especially when exposed to salt fog conditions. 50 minute open time.

Loctite® H8500™ Speedbonder™ *PATENTED* Structural Adhesive

Steel

A structural adhesive that provides tough, durable bond strength on steel surfaces. Excellent peel and impact strength. 20-30 minute open time.

Loctite® H8000™ Speedbonder™ Structural Adhesive

Aluminum

Fast fixturing, structural adhesive with 10-15 minute open time. Provides excellent impact and peel strength on aluminum surfaces.

Loctite® H8600™ Speedbonder™ *PATENT PENDING* Structural Adhesive

Galvanized Steel

Provides robust bond strength to a variety of metal surfaces exposed to various environmental conditions. Specially formulated to provide long-term bond strength on galvanized steel.

		General Purpose		High Performance			
Loctite® Speedbonder™ Structural Adhesives Typical Properties		Loctite® H3151™	Loctite® H4500™	Loctite® H4720™	Loctite® H8000™	Loctite® H8500™	Loctite® H8600™
Mix Ratio		1:1	10:1	10:1	10:1	10:1	2:1
Color – Mixed		Pale Yellow	Pale Yellow	Grey	Green	Grey	Blue
Viscosity (Part A/Part B) (cP)		70,000 / 70,000	54,000 / 54,000	700,000 / 800,000	160,000 / 40,000	600,000 / 900,000	80,000 / 95,000
Average Open Time (minutes)		50	5	50	10	25	10
Fixture Time (minutes)		90	20	100	20	30	40
Full Cure Time (hours)		24	24	24*	24	24	24*
Metals – Shear Strength (psi)	Steel	3,800	4,400	4,300	3,300	2,900	5,600
	Aluminum	3,600	4,200	4,000	3,300	2,600	4,600
	Stainless Steel	3,800	4,200	3,900	3,300	2,200	4,500
	Galvanized Steel	1,400	2,500	1,600	200	1,800	2,800
Plastics – Shear Strength (psi)	Polycarbonate	700	900	>500	800	400	>1,000
	PVC	1,900	2,200	500	900	1,000	900
	FRP	>1,900	>1,800	1,800	>1,400	1,200	1,900
	Gelcoat	>1,500	>1,500	1,800	>1,300	1,700	1,700
Peel Strength (pli)	Steel	45	38	44	40	77	44
	Aluminum	15	20	25	55	46	23
Impact Strength (kJ/m ²)	Steel	8	12	9	18	27	38
	Aluminum	33	38	39	>42	>42	26
Salt Fog at 1,000 hrs. (psi)	Steel	2,800	3,300	4,100	1,100	1,400	3,500
	Aluminum	300	300	2,700	1,100	800	1,900
Humidity at 1,000 hrs. (psi)	Steel	1,700	2,400	5,600	2,200	2,600	6,600
	Aluminum	1,700	1,000	2,700	2,000	500	500
Hot Strength (psi)	Steel	900	1,000	1,200	500	1,000	2,200
Package Sizes	50 ml dual cartridge	83015	N/A	N/A	N/A	N/A	40875
	400 ml dual cartridge	83014	N/A	N/A	N/A	N/A	38762
	490 ml dual cartridge	N/A	83041	41799	36160	40884	N/A
	5 gal (Part A / Part B)**	N/A N/A	83043 / 83042	N/A 39013	35939 / 35940	40889 / 40888	38760 / 38761
	55 gal (Part A / Part B)**	83017 / 83016	N/A N/A	39015 / N/A	N/A N/A	N/A N/A	N/A N/A

* Achieves >80% strength after 24 hours, 100% strength after 48 hours. ** Made to order items may require 3-4 weeks for shipment.
> = Adhesive exceeded the strength of substrate or the upper test limit.

To consult with an application specialist over the phone, or to arrange for a visit by your local Loctite® Adhesives & Sealants specialist, simply call 1-800-LOCTITE (562-8483).

For technical or material safety data sheets on any Loctite® Speedbonder™ product, simply log onto our web site at www.loctite.com or call 1-800-LOCTITE (562-8483).



Loctite® Dual Component Dispensing Equipment

All Loctite® Speedbonder™ two-part structural adhesives are easily dispensed through Loctite® dual component dispensing systems. When used in conjunction with the static mix nozzles, these systems provide a convenient, cost-effective method to accurately apply product with minimal waste. Available in a wide array of options, these systems include portable, manual or pneumatic applicators for dual cartridges and higher precision benchtop volumetric systems for both dual cartridges and bulk packages.

Loctite® Hand Held Applicators

Available in either manual or pneumatic versions for dispensing from dual cartridges.



Item No.	Description
98472	Loctite® 50 ml Manual Dispenser (1:1 and 2:1 Mix Ratios)
986086	Loctite® 10:1 Cartridge Plunger (for use with 50 ml Manual Dispenser)
97042	Loctite® 50 ml Pneumatic Dispenser (1:1, 2:1, and 10:1 Mix Ratios)
983438	Loctite® 400 ml Dispenser – Manual (1:1 and 2:1 Mix Ratios)
985246	Loctite® 490 ml Dispenser – Manual (10:1 Mix Ratio)
983439	Loctite® 400 ml Dispenser – Pneumatic (1:1 and 2:1 Mix Ratios)
985249	Loctite® 490 ml Dispenser – Pneumatic (10:1 Mix Ratio)



Loctite® Posi-Link™ Volumetric Dispense Systems PATENT PENDING

For the most accurate and reliable dispensing requirements, the patent-pending Loctite® Posi-Link™ Volumetric Dual Cartridge Dispensers are capable of dispensing adhesive shots as small as 0.001 ml. Designed for use with 50 ml and 400/490 ml 1:1, 2:1 or 10:1 dual cartridges, this easily programmable, positive displacement system dispenses an exact volume of adhesive regardless of viscosity or environmental temperature. The electromechanically operated dispense system consists of a controller, actuator, nest and pinch valve, and can be used in hand held, stationary or robotic applications.

Visit www.equipment.loctite.com or call 1-800-LOCTITE (562-8483) for more information.

Loctite® Meter Mix 1000SS Dispense System

The wetted components of this bench top system are made of 316 stainless steel, specifically for use with MMA-type structural adhesives. Available in fixed or variable ratios, the system comes standard with a hand held dispense valve that is pneumatically controlled to open/close and to dispense. Flow rate is adjustable through the use of a pressure regulator.



Item No.	Description
988904	Fixed Ratio
988905	Variable Ratio

Loctite® Mix Nozzles

Disposable, plastic nozzles conveniently attach to Loctite® Speedbonder™ dual cartridges. Adhesive is automatically mixed as it travels through the static-mix nozzle. Sold in bags of 10.

Item Numbers	Package Quantity	Description
98473	10	50 ml Square Mix Nozzle, Luer/Stepped Combo Tip, 4.5" Overall Length, 5.3 mm ² , 24 elements, 1:1, 2:1, 4:1 mix ratios.
98454	10	50 ml Mix Nozzle, Luer Tip, 6.0" Overall Length, 6.0 mm diameter, 21 elements, 1:1, 2:1, 4:1 mix ratios.
98463	10	50 ml Mix Nozzle, Stepped Tip, Keyed, 5.9" Overall Length, 5.4 mm diameter, 28 elements, 10:1 mix ratio.
98474	10	200/400 ml Square Mix Nozzle, Stepped Tip, 5.1" Overall Length, 7.5 mm ² , 24 elements, 1:1, 2:1 mix ratios.
98459	10	200/400 ml Mix Nozzle, Stepped Tip, 10.8" Overall Length, 10 mm diameter, 24 elements, 1:1, 2:1 mix ratios.
98461	10	200/400 ml Mix Nozzle, Stepped Tip, Keyed, 10.8" Overall Length, 10 mm diameter, 24 elements, 4:1, 10:1 mix ratios.

Loctite® Custom Built Meter Mix Dispense Systems

Henkel also offers dispensing systems for 5 gallon and larger package sizes for high volume assembly operations. Contact 1-800-LOCTITE (562-8483) for further information.





Henkel – Your worldwide partner



For technical information and/or product availability, call **1-800-LOCTITE** or visit **www.loctite.com**

For more information about our line of dispensing equipment, visit **www.equipment.loctite.com**

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