# STRUCTURAL ADHESIVES

# Superior speed, aesthetics and strength. Without the weight.

## PROBLEM

With traditional fastening: Added weight, time, cost and difficulty.

## SOLUTION

With structural adhesives: Lightweight, strong, durable, less expensive fastening with better end product aesthetics.

# Take off the weight. Take on the load.

Structural adhesives join two materials firmly and permanently. The adhesive is the "bridge" between the substrates and provides advantages such as:

- Uniform stress distribution for better product reliability
- Design freedom for light weight constructions

Adhesives are easy to apply and assemble. The selection of the right adhesive depends on some factors like adhesive-material compatibility and joint requirements.



# How to choose a structural adhesive.

### GENERAL PURPOSE VS. SPECIALTY ADHESIVES

LOCTITE has a wide range of structural adhesives, from general purpose – strong and versatile enough to cover the majority of applications, to specialty - formulated for cases where special properties are needed.

#### **HIGH PERFORMANCE**

Solutions designed for a range of product needs, with respect to impact strength, peel strength, durability, working time

#### **FLEXIBLE SOLUTIONS**

Offering excellent shock absorption, elasticity and adhesion to plastics, metals and glass.

#### SPECIAL SUBSTRATES

From epoxies designed to be safe for food and water contact to acrylics and polyurethanes for bonding e-coated metals, rigid foams, plastics and glass.

#### **BONDING FERRITE COMPONENTS**

Epoxies and acrylics designed for the specific requirements of bonding ferrite (magnets).

#### POTTING

Flowable epoxies designed for filling cavities and protecting components.

#### Legend for your adhesive choice:



etc.

#### **FIXTURE TIME**

A range of fixture times from ultra fast to slow to meet your process requirements.



LOCTITE structural adhesives can bond most materials.



# LOCTITE AA 326

#### Fast Fixture, Small Gaps, 2-Step

LOCTITE AA 326 is a yellow to amber, 2K no mix, medium viscosity (thixotropic) structural and magnet bonder which is activated with LOCTITE SF 7649. It has good adhesion to different types of ferrites, a fixture time of 3 minutes and a shear strength of 15 N/mm<sup>2</sup>. It can be used in temperature up to 120 °C.

#### **Benefits:**

- Fast fixture
- High strength
- All purpose bonder



**Fixture time:** 3 min.









# **LOCTITE EA 3430**

#### **Optically Clear, Water-Resistant**

LOCTITE EA 3430 is a 2K, clear epoxy adhesive which cures rapidly at room temperature after mixing. It is a general purpose adhesive which develops high strength on a wide range of substrates. The gap filling properties make this adhesive system suitable for rough and poorly fitting surfaces.

#### **Benefits:**

- High transparent
- Water resistance
- Fast curing



**Fixture time:** 15 min.

**Substrate:** Metal, glass, ceramic, rigid plastic

#### **STRUCTURAL ADHESIVES**

Find the right product for your application

# **General Purpose**



Fixture time: 3 min

Substrate: Metals, ceramic, plastics

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**GENERAL PURPOSE** 

LOCTITE AA 330 **LOCTITE AA 326 LOCTITE EA 3421** LOCTITE EA 3423

#### **SPECIALTY**

#### Working Life/Heat Cure

#### **WORKING LIFE**

Time ranges (before assembly) from fast to slow to meet your process requirements.

≥ 1 Hour

<1 Hour **LOCTITE EA 3450 LOCTITE EA 9450 LOCTITE EA 9461** LOCTITE EA 3430

**LOCTITE EA 9483 LOCTITE EA 9497** 

#### **Heat Cure**

**LOCTITE EA 9514** 

#### **High Performance**

**LOCTITE AA 3342 LOCTITE EA 9492**  **LOCTITE AA 3298 LOCTITE EA 9466** 

#### **Plastic Repair**

**TEROSON PU 9225** 

**TEROSON PU 9225 SF** TEROSON PU 9225 SF ME TEROSON PU 9225 UF ME

#### **Multi-Substrate Repair Bonder**

**TEROSON PU 6700 TEROSON PU 6700 ME** 



Substrate: Aluminium, steel, ferrite

Gap: 0.5 mm Temperature resistance: 120 °C Colour: Pale yellow Chemistry: Two-step acrylic Activator: LOCTITE SF 7388







Working life: 30 - 60 min.

Working life: 30 - 150 min.



Substrate: Metals, ceramics, rigid plastics, wood

Substrate: Metals (can be sanded)

Temperature resistance: 120 °C Colour: Clear ambe Chemistry: 2K Epoxy

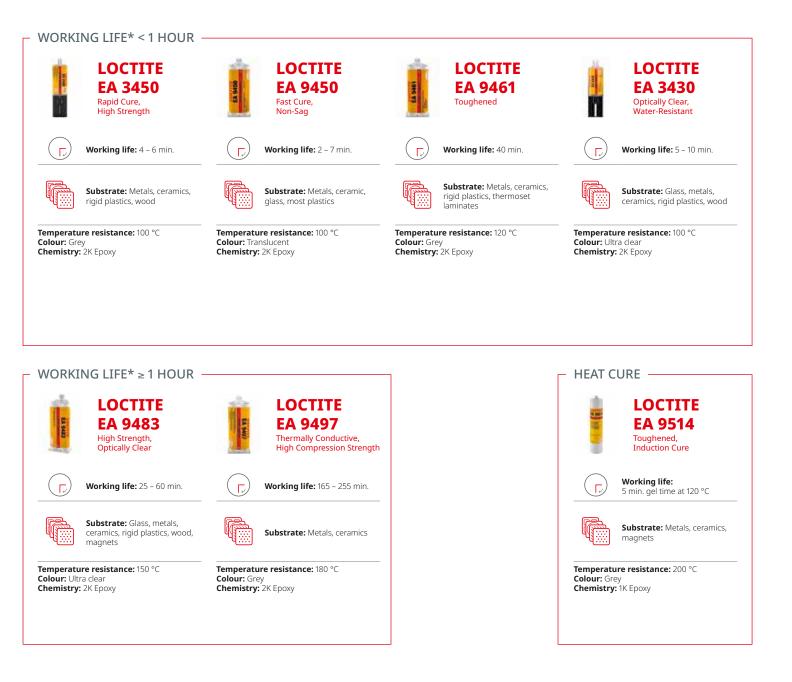
Temperature resistance: 120 °C Colour: Grev Chemistry: 2K Epoxy

#### LOCTITE SERVICES

#### **IMPROVE STRENGTH AND** AESTHETICS IN REDUCED TIME.

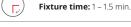
https://www.henkel-adhesives.com/uk/ en/insights/loctite-services-signup.html

# Work Life/Heat Cure



# **High Performance**





Substrate: Metals, magnets

Gap (if applicable): 0.5 mm Temperature resistance: 180 °C Colour: Dark vellow

Chemistry: Two-step acrylic Activator: LOCTITE SF 7386



AA 3298 Glass Bonding

Fixture time: 3 min.



Gap (if applicable): 0.5 mm Temperature resistance: 120 °C Colour: Straw vellow Chemistry: Two-step acrylic Activator: LOCTITE SF 7386

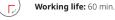


Working life: 15 min.



Temperature resistance: 180 °C Colour: White Chemistry: 2K Epoxy







Substrate: Metals, ceramics,

Temperature resistance: 120 °C Colour: Off-white Chemistry: 2K Epoxy

**Plastic Repair** 





Pot life/Working life: 10 min.



Substrate: Paintable plastic parts



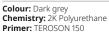
Colour: Dark grey Chemistry: 2K Polyurethane Primer: TEROSON 150



Pot life/Working life: 2 min.

**TEROSON** 







**TEROSON** PU 9225 UF ME Ultra Fast Cure, MicroEmission™

Pot life/Working life: . 1 min. max.



Substrate: Paintable plastic parts

Colour: Black Chemistry: 2K Polyurethane Primer: TEROSON 150

# **Multi-Substrate Repair Bonder**



**TEROSON** PU 6700 Solvent-Free



Pot life/Working life: 10 min.



Substrate: Metals, plastics, painted surfaces, wood

Colour: Dark grey Chemistry: 2K Polyurethane Paintable / Sandable: Yes





**TEROSON** PU 6700 ME

Fast Curing, MicroEmission™

Colour: Dark grey Chemistry: 2K Polyurethane Paintable / Sandable: Yes

L. Pot life/Working life: 2 min. Substrate: Paintable plastic

parts Colour: Dark grey

Chemistry: 2K Polyurethane Primer: TEROSON 150

## Equipment

#### **DISPENSERS**

#### **Pneumatic**



Manual



#### 50 ml

LOCTITE 96001 50 ml 1:1/2:1 Dual Cartridge Applicator Manual IDH 26745

#### LOCTITE 97042 50 ml 1:1/2:1 Dual Cartridge Applicator Pneumatic IDH 476898

50 ml 10:1 Dual Cartridge Applicator Manual IDH 1034026

50 ml 10:1 Dual Cartridge Applicator Pneumatic IDH 1493310 **200 ml** LOCTITE EQ HD14 200 ml Dual Cartridge Manual Dispenser

**1:1 - 10:1** IDH 2693822

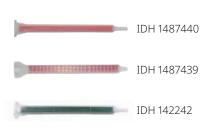
LOCTITE EQ HD14 200 ml Dual Cartridge Pneumatic Dispenser 1:1 - 10:1 IDH 2693824

#### 400 ml

LOCTITE EQ HD14 400 ml Dual Cartridge Manual Dispenser 1:1 – 10:1 IDH2693823

LOCTITE EQ HD14 400 ml Dual Cartridge Pneumatic Dispenser 1:1 - 10:1 IDH2693825

#### NOZZLES



50 ml Epoxy Nozzle 400 ml

Epoxy Nozzle

50 ml Polyurethane Nozzle

#### HAVE A UNIQUE APPLICATION? SEE THE FULL LINE:

https://www.henkel-adhesives. com/uk/en/products/industrial-adhesives/structural-adhesives.html

Please refer to page 130 for additional equipment/information.



## STRUCTURAL ADHESIVES

2-STEP ACRYLICS										
Product	Pack Size	Features	Colour	Viscosity (mPa•s)	Gap Fill (mm)	Fixture Time (min.)	Shear Strength, GBMS (N/mm²)	Temperature Resistance (°C)		
GENERAL PUI	GENERAL PURPOSE									
LOCTITE AA 330	50 ml kit	General purpose adhesive for metals, ceramic, plastics	Pale yellow	67,500	0,5	3	23	120		
MAGNET BON	MAGNET BONDING									
LOCTITE AA 326	50 ml	Ferrites to plated materials in electric motors, loudspeakers hardware, jewellery	Light amber	18,000	0,5	3	15	120		
LOCTITE AA 3342	300 ml	High temperature magnet adhesive for metals, magnets	Dark yellow	90,000	0,5	1 – 1.5	23	180		
GLASS BONDING										
LOCTITE AA 3298	300 ml	Excellent glass bonder	Straw yellow	29,000	0,5	3	29	120		

EPOXIES										
Product	Pack Size	Features	Colour	Viscosity (mPa•s)	Mix Ratio	Fixture Time (min.)	Shear Strength, GBMS (N/mm²)	Temperature Resistance (°C)		
HIGH PERFORMANCE										
LOCTITE EA 3421	50 ml	Universal adhesive with long working time	Clear amber-yellow	37,000	1:1	240	22	120		
LOCTITE EA 3423	50 ml, 200 ml	Universal adhesive, excellent for metals, good moisture resistance	Grey	300,000	1:1	180	17	120		
LOCTITE EA 9461	50 ml	High impact resistant, gap filling	Grey	72,000	1:1	240	25	120		
LOCTITE EA 9466	50 ml, 400 ml	High impact and peel resistance, excellent bond strength to a wide variety of plastics and metals	Off-White	35,000	2:1	180	37	120		
LOCTITE EA 9483	50 ml, 400 ml	Optical clarity and high strength, ideal for bonding decorative panels and displays	Ultra Clear	7,000	2:1	210	23	150		
LOCTITE EA 9492	50 ml, 400 ml	High temperature and chemical resistance	White	30,000	2:1	75	20	180		
LOCTITE EA 9497	50 ml	High temperature, thermally conductive, room temperature cure	Grey	12,000	2:1	480	20	180		
FAST FIXTURE										
LOCTITE EA 3430	24 ml, 50 ml	Universal, fast curing	Ultra Clear	23,000	1:1	15	22	100		
LOCTITE EA 3450	25 ml	Fast curing, ideal for metal repairs	Grey	35,000	1:1	15	25	100		
LOCTITE EA 9450	50 ml	Fast curing, gap filling	Translucent	200,000	1:1	13	23	100		
ONE PART/HEAT CURE										
LOCTITE EA 9514	300 ml	High temperature resistance and mechanical strength, excellent impact resistance	Grey opaque paste	45	_	_	44	200		

POLYURETHANES									
Product	Pack Size	Features	Colour	Pot Life <i>/</i> Working Time (min.)	Cure Time @ RT (h)	Paintable?	Sandable?	MicroEmission™?	
TEROSON PU 6700	50 ml, 310 ml, 400 ml	Solvent-free, multi-purpose bonder for metals, plastics, wood, painted surfaces	Grey	10	6	Yes	Yes	No	
TEROSON PU 6700 ME	50 ml, 400 ml	Solvent-free, multi-purpose bonder for metals, plastics, wood, painted surfaces	Grey	5	5	Yes	Yes	Yes	
TEROSON PU 9225	50 ml	Fast curing repair adhesive, in combination with plastics the use of an approved Henkel primer is absolutely necessary	Dark Grey	10	5	Yes	Yes	No	
TEROSON PU 9225 SF	50 ml	Fast curing repair adhesive, in combination with plastics the use of an approved Henkel primer is absolutely necessary	Dark Grey	2	1.5	Yes	Yes	No	
TEROSON PU 9225 SF ME	50 ml	Fast curing repair adhesive, in combination with plastics the use of an approved Henkel primer is absolutely necessary	Dark Grey	2	1.5	Yes	Yes	Yes	
TEROSON PU 9225 UF ME	50 ml	Fast curing repair adhesive, in combination with plastics the use of an approved Henkel primer is absolutely necessary	Black	1 max.	1.5	Yes	Yes	Yes	

