



**WANGDEX**

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# General Manufacturing Instant Adhesives Selector Guide



**Henkel**



**Engineering Support**

With unsurpassed development, engineering and field support – Henkel provides the expertise to empower customers to improve quality, efficiency and innovation.

**Design Partnership**

Our experienced team of engineers provide documented design and application support.

**Global Capabilities**

We are the global technology leader with an extensive network to support the customers' value stream.

**Customer Intimacy**

Through close collaboration and intimate knowledge of customer applications and processes, Henkel creates exciting solutions that enable innovation.

**Innovation Leader**

As the innovation leader in sealing, bonding and coating – Henkel delivers solutions to meet fast design changes and developmental challenges.

**LOCTITE® is the world's #1 brand of engineering adhesives & sealants. Our solutions reduce cost and increase reliability.**

# Reliability in every drop



LOCTITE® Instant Adhesives reliably bond almost any combination of materials in seconds. Now, the bond is resistant to even higher temperatures and humidity — enlarging the spectrum of applications with every drop.



## Achieving more with less

Our commitment to leadership in sustainability is deeply embedded in our values. With our revised Sustainability Strategy for 2030, we are building on our strong track record. At the same time, we are aiming to address one of the central future challenges: to decouple growth from resource consumption. At the heart of this strategy is therefore the simple, yet challenging, ambition: to achieve more with less. It aims to create more value for our customers, consumers, communities and the company alike, while simultaneously reducing the environmental footprint.





# Reliability in every drop



LOCTITE® PRODUCT	CHARACTERISTICS	PRODUCT HIGHLIGHTS	BENEFITS	SUBSTRATES AND APPLICATIONS
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## GENERAL PURPOSE



**401**

- Clear colour
- Low viscosity

- High thermal performance
- For rapid bonding of plastics, rubbers and metal
- For porous substrates such as wood, paper, leather, cork and fabric
- For acidic surfaces such as chromated or galvanized surfaces

UNIVERSAL

**454**

- Clear colour
- High viscosity gel

- High thermal performance
- For use on vertical or overhead surfaces, when non-dripping is required
- For porous substrates such as wood, paper, leather, cork and fabric
- For acidic surfaces such as chromated or galvanized surfaces

UNIVERSAL

**495**

- Clear colour
- Low viscosity

- High thermal performance
- For rapid bonding of plastics, rubbers and metal

UNIVERSAL

**406**

- Clear colour
- Low viscosity

- High thermal performance
- For rapid bonding of plastics, rubbers, including EPDM and elastomers
- Well suited for polyolefines in combination with LOCTITE® Primer 770

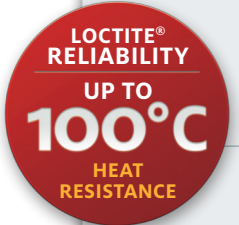
PLASTIC AND RUBBER

- Very fast fixture speed
- Particularly suited for bonding a wide variety of materials, such as metals, plastics, elastomers, paper, leather, cork, fabric, wood, chromate plated parts, etc.
- Fast cure even in challenging environments

- Abrasive tips to metal – *Machine tools*
- Stainless steel to carbon fiber – *Cutlery*
- Glass-filled polyurethane to steel – *Firearm assembly*
- Aluminium to rubber pads – *Ladders*
- PVC to EPDM rubber – *Appliance consoles*
- Urethane foam rubber to painted steel – *Handle grips*
- Paper to PVC – *Packaging materials*
- ABS to PVC – *Vacuum cleaners*
- Acrylic to PVC – *Plastic fencing*
- Braided sleeve to rubber – *Hoses*
- Synthetic rubber to ABS – *Legs to equipment housings*



## LOW ODOR / LOW BLOOM



**403**

- Clear colour
- High viscosity

- High thermal performance
- High moisture resistance
- For applications where cosmetic aspects and low bloom is required
- For low odor during use
- For porous substrates such as wood, paper, leather, cork and fabric

**408**

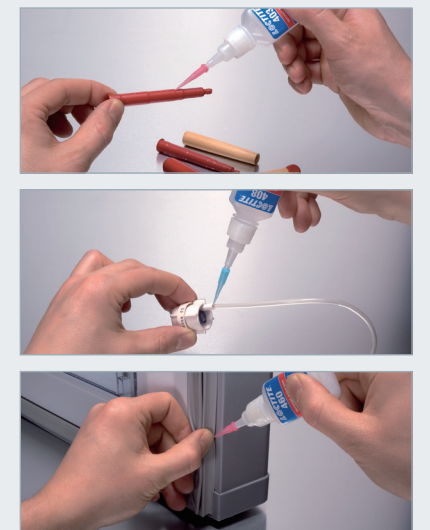
- Clear colour
- Very low viscosity

**460**

- Clear colour
- Low viscosity

- High cosmetic appearance
- Low odor
- Reduced white residue “blooming” or “frosting”
- Surface insensitive
- One-part room temperature cure

- ABS to polycarbonate – *Battery cases*
- Aluminium to acrylic – *Cosmetic cases*
- Polypropylene to aluminium – *Identification tags / labels*
- Clear plastic to PVC – *Display systems*
- Wood to ABS – *Fountain pens*
- Rubber to metal – *Gasketing and sealing*
- Stainless steel to rubber – *Electronic housings*
- SS clips to plastic – *Handheld electronics*
- ABS to polystyrene – *Small appliances*



# PROCESS SOLUTIONS

# PRODUCT SELECTOR CHART

## LOCTITE® DISPENSING EQUIPMENT ▼



	LOCTITE® CA VOLUMETRIC HAND PUMP	LOCTITE® BENCHTOP PERISTALTIC DISPENSER	LOCTITE® MANUAL HAND HELD DISPENSE SYSTEM	LOCTITE® SEMI-AUTOMATED DISPENSE SYSTEM
<b>Dispensing Capabilities</b>	Dots	Dots, beads	Dots, drops, beads	Microdots, dots or drops, microbeads to medium beads
<b>Product Viscosity</b>	Low	Low	Low to medium	Low to medium
<b>Dispenser Type</b>	Volumetric	Volumetric	Pressure / time	Pressure / time
<b>Suck Back</b>	No	Yes	No	Yes
<b>Add-On Features</b>	None	None	Fingerswitch	Online monitoring, PLC, ...
<b>Level Sensor</b>	No	No	Yes	Yes
<b>Source</b>	None	Electric	Electric and pneumatic	Electric and pneumatic
<b>Suitable Pack</b>	20 g bottle	20 g - 500 g bottle	500 g bottle	500 g bottle
<b>Item Number</b>	1506477	98548	<sup>1</sup> See below	<sup>2</sup> See below

<sup>1</sup> INCLUDES: • LOCTITE® Integrated Controller & Reservoir (97009)  
 • LOCTITE® LV Hand Held Applicator (97130)  
 • LOCTITE® Footswitch (97201)  
 • LOCTITE® Air Line Filter, Regulator Gauge 0 to 150 psi (985397)

<sup>2</sup> INCLUDES: • LOCTITE® Light Cure Dispense Valve (98009)\*  
 • LOCTITE® Bond-A-Matic® 3000 Reservoir, 0 to 100 psi (982723)  
 • LOCTITE® Single Channel Automatic Controller (97152)  
 • LOCTITE® Air Line Filter, Regulator Gauge 0 to 150 psi (985397)  
 • LOCTITE® Footswitch (97201)  
 \* LOCTITE® VA10 Micro Diaphragm Valve (1611449) (Alternative Choice)

## LOCTITE® SURFACE PREPARATION ▼

LOCTITE® 770 PRIMER	LOCTITE® 7455 ACTIVATOR	LOCTITE® 768 X-NMS CLEANUP SOLVENT
<ul style="list-style-type: none"> <li>Adhesion promoter</li> <li>Especially for polyolefins, such as PE and PP</li> <li>Suitable for PTFE and thermoplastic elastomers</li> <li>Long on-part life</li> <li>Fluorescent under UV light / black light</li> </ul>	<ul style="list-style-type: none"> <li>Pre- and post-application</li> <li>Provides fast cure when post-applied</li> <li>Suitable for all plastics</li> <li>No damage to enamel coating</li> <li>Eliminates blooming</li> </ul>	<ul style="list-style-type: none"> <li>Quickly and safely dissolves cured cyanoacrylate-based adhesives</li> <li>Debonds parts</li> <li>Solvent odor</li> </ul>
<ul style="list-style-type: none"> <li>Base: n-Heptane</li> <li>On-part life: ≤ 8 hours</li> <li>Dry time @ 20 °C: ≤ 30 seconds</li> </ul>	<ul style="list-style-type: none"> <li>Base: n-Heptane</li> <li>On-part life: ≤ 1 minute</li> <li>Dry time @ 20 °C: ≤ 60 seconds</li> </ul>	<ul style="list-style-type: none"> <li>Base: solvent</li> </ul>

PRODUCT CATEGORY	LOCTITE® PRODUCT	SUBSTRATES					DESIGN CONSIDERATIONS				ENVIRONMENT		ASPECT	
		PLASTIC AND RUBBER	METALS	MAGNETS (FERRITE, ETC.)	POROUS AND/OR ACIDIC SURFACES	POLYOLEFINS	VISCOSITY mPa·s	FILLET CURE	VERTICAL APPLICATION	LARGER GAP	MAXIMUM TEMPERATURE °C	HUMIDITY	COLOUR	COSMETIC APPEARANCE
Universal	401	X	X	X	XX	X <sup>3</sup>	100	X <sup>1</sup>			120		Clear	
	454	X	X	X	XX	X <sup>3</sup>	Gel	X <sup>1</sup>	XX	XX	120		Clear	
	495	XX	XX	X		X <sup>3</sup>	45	X <sup>1</sup>			120		Clear	
Plastic and Rubber	406	XX	X			XX <sup>3</sup>	20	X <sup>1</sup>			120		Clear	
	424	XX	X			X <sup>3</sup>	100	X <sup>1</sup>			80		Clear	
Metal	415	X	XX			X <sup>3</sup>	1200	X <sup>1</sup>	X	X	80		Clear	
	496	X	XX			X <sup>3</sup>	125	X <sup>1</sup>			80		Clear	
Specialized	420	XX	XX	X		X <sup>3</sup>	2				80		Clear	
Low Odor / Low Bloom	403	X	X		XX	X <sup>3</sup>	1000	X <sup>1</sup>	X	X	100		Clear	XX
	408	X	X		XX	X <sup>3</sup>	5				100		Clear	XX
	460	X	X		XX	X <sup>3</sup>	40	X <sup>1</sup>			100		Clear	XX
Toughened	435	XX	X	X	XX	X <sup>3</sup>	200	X <sup>1</sup>			100	X	Clear	
	438	XX	X	X	XX	X <sup>3</sup>	200	X <sup>1</sup>			100	X	Black	
	480	X	XX	XX		X <sup>3</sup>	200	X <sup>1</sup>			100	X	Black	
Flexible	4204	X	X	X		X <sup>3</sup>	4000	X <sup>1</sup>	X	X	120	XX	Clear	
	4850	XX	X		XX	X <sup>3</sup>	400	X <sup>1</sup>			70		Clear	
Light Cure	4860	XX	X		XX	X <sup>3</sup>	4000	X <sup>1</sup>	X	X	70		Clear	
	4305	X	X			X <sup>3</sup>	900	X <sup>2</sup>	X	XX <sup>2</sup>	80	X	Clear	XX

LEGEND:  
 Upgrades  
 XX Highly recommended  
 X Recommended

PLEASE NOTE:  
 1 In combination with LOCTITE® 7455 Activator  
 2 Cures with UV light  
 3 In combination with LOCTITE® 770 Primer

• LOCTITE® Instant Adhesives perform best on clean surfaces.  
 Dirt, grease and foreign matter should be removed using LOCTITE® cleaner.  
 • Always wipe the nozzle of the adhesive container after use.  
 • Optimal storage condition: 2 °C to 8 °C

AGENCY APPROVALS:  
 For the latest information on agency approvals / specifications (ISO 10993 Compliance, Military Specifications, NSF® International), please contact your local Henkel customer support for assistance.

**LOCTITE®**  
**BONDERITE®**  
**TECHNOMELT®**  
**TEROSON®**  
**AQUENCE®**

Henkel products are designed to meet the specifications and testing standards of a variety of agencies. Because such standards change or may be modified, no warranty is given regarding such compliance. The information provided may be used as a quick reference tool to aid in design or application. For up-to-the-minute information on agency approvals, or to inquire about additional agency approvals, please contact Henkel Product Management team or local Technical Support team.

Contact us at: [www.henkel.com](http://www.henkel.com)

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