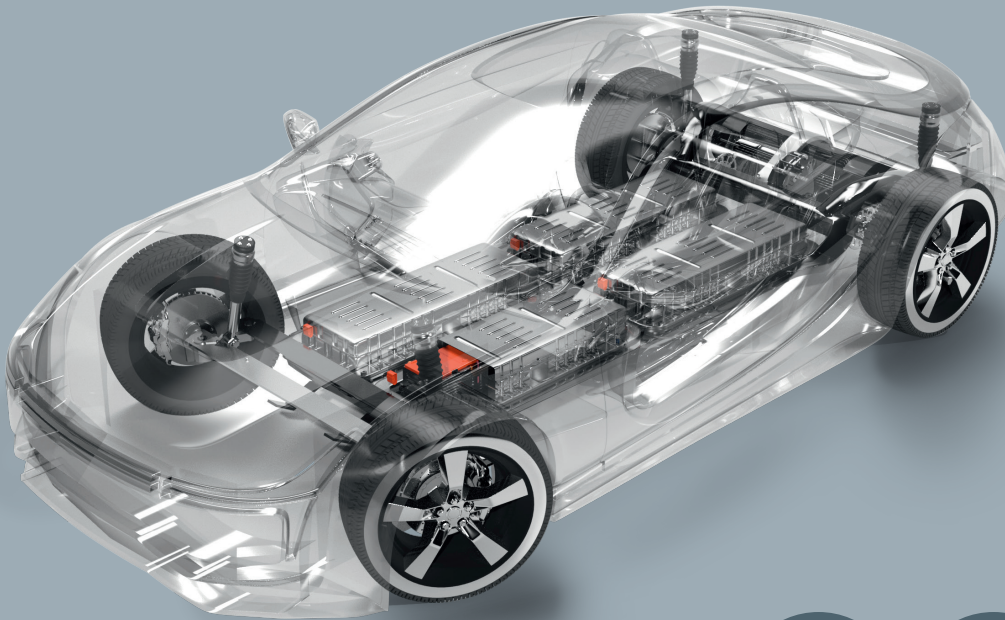


E-MOBILITY



## Structural Bonding Technologies for e-Mobility Applications

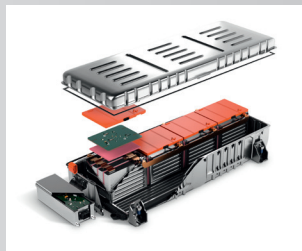
LOCTITE® adhesives are providing battery manufacturers, flexibility and efficiency compared to mechanical fasteners, welding and brazing.

Combined with product, engineering, design, application and testing expertise, Henkel's full support capabilities contribute to process and cost efficiencies for large scale manufacturing of electric vehicles.

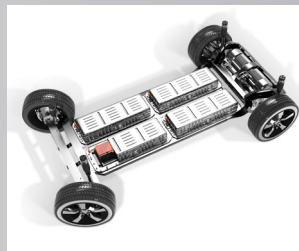
### Applications



Battery Cell



Battery Module



Battery Pack



## Comprehensive portfolio of Structural Adhesive Solutions:

	LOCTITE® H8000	LOCTITE® H3500	LOCTITE® 9460	LOCTITE® UK 6800	LOCTITE® EA 9497	LOCTITE® UK 2015	TEROSON® MS 9399	LOCTITE® EA 9065	TEROSON® MS 9396
TECHNOLOGY	Acrylic	Acrylic	Epoxy	Polyurethane	Epoxy	Polyurethane	Silane-modified	Epoxy	Silane-modified
CURING MECHANISM	2C	2C	2C	2C	2C	2C	2C	2C	1C Moisture
KEY PROPERTIES	<ul style="list-style-type: none"> <li>• Metal and plastic bonder</li> <li>• High peel strength</li> </ul>	<ul style="list-style-type: none"> <li>• Metal and plastic bonder</li> <li>• Non-sag, fast fixturing</li> </ul>	<ul style="list-style-type: none"> <li>• High impact resistance</li> <li>• High shear strength</li> </ul>	<ul style="list-style-type: none"> <li>• High thermal conductivity</li> <li>• High elongation</li> </ul>	<ul style="list-style-type: none"> <li>• High thermal conductivity</li> <li>• High temperature resistance</li> </ul>	<ul style="list-style-type: none"> <li>• High shear strength</li> <li>• High elongation</li> </ul>	<ul style="list-style-type: none"> <li>• Thixotropic elastic bonder</li> <li>• Free of solvents, isocyanates, and silicones</li> </ul>	<ul style="list-style-type: none"> <li>• High strength</li> <li>• High modulus</li> </ul>	<ul style="list-style-type: none"> <li>• High adhesion to multi-substrates</li> <li>• Free of solvents and siloxanes</li> </ul>
REGIONAL AVAILABILITY	NA, AP	NA	NA, EMEA, AP	NA, EMEA, AP	EMEA	EMEA	NA, EMEA	EMEA	AP



### Benefits

#### Costs

- > Increased manufacturing output and higher productivity versus mechanical fasteners
- > Reduced manufacturing costs due to elimination of manual labor work and use of robot automation
- > Cost reduction through reduction in mechanical fasteners
- > Cost reduction due to high speed of automated application with standard dosing equipment



#### Design Flexibility

- > Allows for complex geometric part designs to meet vehicle architectural needs through adhesive joints versus welding or mechanical fastening limitations



#### Sustainability

- > Flexible automated cell that can be repurposed for design changes or new programs



#### Performance and Process

- > Enabling of multi-substrate concepts (plastic – metal) for modern Lightweight designs
- > High mechanical performance: high strength and high elongation at the same time
- > Thermal properties for heat sensitive applications
- > Automated, fast and high-precision process by robots suitable for mass production



#### Service

- > Process know-how and equipment
- > Engineering and design support

GET IN  
CONTACT  
WITH US

**Americas**  
USA  
Henkel Corporation  
Madison Heights  
32100 Stephenson Highway  
Madison Heights, MI 48071  
United States  
Phone: (+1) 248 583 9300

**Asia-Pacific**  
China  
Henkel (China) Co. Ltd.  
No. 928 Zhang Heng Road  
Pu Dong  
201203 Shanghai  
China  
Phone: (+86) 21 2891 8000

**Europe**  
Germany  
Henkel AG & Co. KGaA  
(Headquarters)  
Henkelstraße 67  
40589 Düsseldorf  
Germany  
Phone: (+49) 211 797-0

<https://www.henkel-adhesives.com/us/en.html>