ASSEMBLY-TO-REPAIR SOLUTIONS FOR HEAVY DUTY TRUCKS

Selector Guide

Parker Lord

APPLICATIONS FOR HEAVY DUTY TRUCKS

For over 50 years, Parker Lord has provided high-value product solutions and application expertise within the Heavy Duty Truck industry. Our Structural Adhesives offer a myriad of benefits including improved strength and durability, enhanced exterior aesthetics and reduced cost compared to mechanical fastening methods. Our material solutions are employed in all aspects of manufacture from design, to the assembly line and into repair and serve as industry benchmarks for quality, value and durability.

ASSEMBLY ADHESIVES	FUSOR REPAIR ADHESIVES
• Improve Aesthetics, Strength and Durability • Lightweighting Solutions • Shorten Assembly Time	• Approved OEM Repair Procedures • Reduce Cycle Time • Identical Adhesive Technologies Used by OEMs

1. Composite Bonding
2. Door Bonding
3. Cab Bonding
4. Body Seam Sealing
5. Side Panel Bonding
6. Front Panel Bonding
7. Roof Bonding
8. Metal Bonding/Sealing
9. Composite Bonding
10. Trailer Wall Repair Patch
11. Flexible Plastic Repair
12. Composite Repair

PRODUCT SELECTION

Assembly & Repair Adhesives

Parker Lord leads the industry with manufacturing innovative and high performance adhesives and seam sealers. Our products employ the latest acrylic, epoxy and urethane technologies to meet our customers' demanding assembly needs while leveraging the same proven technologies to service the collision repair market.

	PRODUCT	TYPICAL PROPERTIES*		
		Work Time	Mix Ratio	Time to Handling Strength
STRUCTURAL ADHESIVES	Maxlok® T3S High Strength Acrylic Adhesive	3-5 minutes @ 77°F (25°C)	4:1	6-8 minutes @ 77°F (25°C)
	Maxlok T6S High Strength Acrylic Adhesive	6-9 minutes @ 77°F (25°C)	4:1	20-24 minutes @ 77°F (25°C)
	Maxlok T18S High Strength Acrylic Adhesive	18-24 minutes @ 77°F (25°C)	4:1	48-72 minutes @ 77°F (25°C)
	LORD® 403 Acrylic Adhesive for Metal Bonding	2-4 minutes @ 75°F (24°C)	4:1	4-6 minutes @ 75°F (24°C)
	LORD 406 Acrylic Adhesive for Metal Bonding	6-10 minutes @ 75°F (24°C)	4:1	12-17 minutes @ 75°F (24°C)
	LORD 410 Acrylic Adhesive for Metal Bonding	20-30 minutes @ 75°F (24°C)	4:1	60-120 minutes @ 75°F (24°C)
	LORD 810S Low Read-Through Acrylic Adhesive	8-12 minutes @ 70°F (21°C)	2:1	20-25 minutes @ 70°F (21°C)
	LORD 850S/852S Impact Resistant Acrylic Adhesive	Varies**	10:1	Varies**
	LORD 7542 High Strength Urethane Adhesive	Varies**	1:1	Varies**
	LORD 7545 High Strength Urethane Adhesive, non-sag	Varies**	1:1	Varies**
	LORD 7555 Urethane Adhesive/Sealant	Varies**	1:1	Varies**
	LORD 7610DTM Direct-to-Metal Adhesive/Sealant	25-35 minutes @ 77°F (25°C)	One Component	6-12 hours @ 77°F (25°C)

*Data is typical and not to be used for specification purposes.
**See technical data sheet for multiple work times and handling strengths.

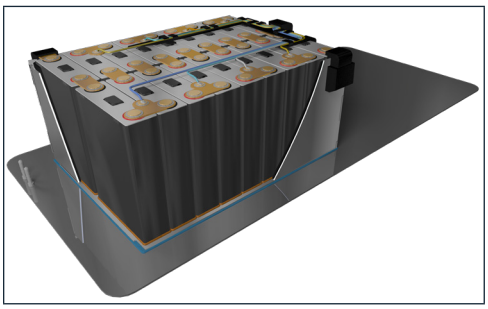
	PRODUCT	TYPICAL PROPERTIES*		
		Work Time	Clamp Time	Paint Time
REPAIR ADHESIVES	Fusor® 108B Metal Bonding Adhesive	40 minutes @ 70°F (21°C)	2 hours @ 70°F (21°C)	--
	Fusor 2098 Crash Durable Structural Adhesive	90 minutes @ 70°F (21°C)	6 hours @ 70°F (21°C) / 30 minutes @ 140°F (60°C)	24 hours @ 70°F (21°C) / 30 minutes @ 140°F (60°C)
	Fusor 152 Plastic Repair Adhesive	3 minutes @ 70°F (21°C)	30 minutes @ 70°F (21°C) / 5 minutes @ 140°F (60°C)	2 hours @ 70°F (21°C) / 60 minutes with heat cure
	Fusor 114LG Plastic Finishing Adhesive	2 minutes @ 70°F (21°C)	--	60 minutes @ 70°F (21°C)
	Fusor 100EZ Plastic Repair Adhesive	40 minutes @ 70°F (21°C)	--	60 minutes @ 180°F (82°C)
	Fusor T21 Composite Adhesive	45 minutes @ 70°F (21°C)	4 hours @ 70°F (21°C) / 20 minutes @ 180°F (82°C)	60 minutes @ 180°F (82°C)
	Fusor 800DTM/801DTM/803DTM Direct-to-Metal Sealer	25 minutes @ 70°F (21°C), 50% RH	--	Immediately or up to 30 days without a scuff

*Data is typical and not to be used for specification purposes.

COOLTHERM® MATERIALS FOR ELECTRIC HEAVY-DUTY TRUCKS

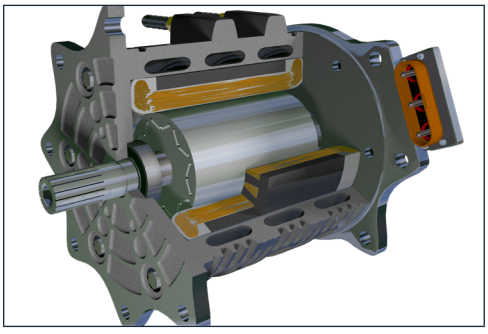
Electrifying heavy-duty trucks are an important part of achieving global CO2 reductions. Innovative e-truck designs can be achieved by using assembly and protection materials contributing to an overall lighter weight and high-performing electric vehicle.

Thermal management is crucial for electric truck applications to ensure that batteries, motors, charging systems, and other power electronics operate reliably, safely, and at optimal temperatures. CoolTherm thermal management materials reduce operating temperatures contributing to higher-performing electric transportation. This line of products includes liquid-dispensed thermally conductive gap fillers, coatings, potting and encapsulants and structural adhesives.



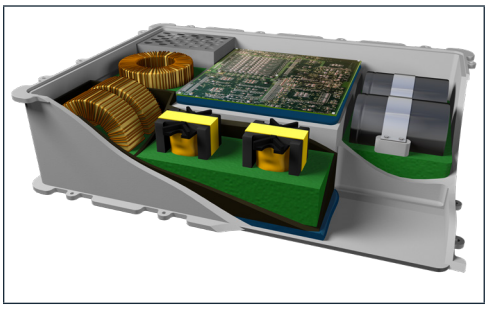
Battery Packs

As battery technology evolves towards increased energy density, the ability to manage heat during charge and discharge cycles is crucial for optimizing performance. Our CoolTherm thermal management materials are fully customizable and compatible with cylindrical, pouch and prismatic battery cells.



Electric Motors

We offer potting and encapsulant materials that are compatible with e-motors. Thermally-conductive epoxy and silicone encapsulants help manage heat, enabling you to increase the power density and life of your electric motor. Our studies have shown a temperature decrease of up to 50°C or an increase in power output up to 30% with CoolTherm.



Power Electronics

CoolTherm adhesives improve heat flow in inductors and transformers and optimize performance during charging & discharging. With low viscosity, these adhesives flow easily into crevices, enabling better impregnation of irregularly-shaped magnetic components and helping to reduce inductor hum.

Gap Fillers

Get the best performance out of your batteries by filling in surface imperfections with a thermally conductive gap filler designed with electric fleet applications in mind.

GAP FILLERS

PRODUCT	CHEMISTRY	THERMAL CONDUCTIVITY (W/m·K)	SHORE HARDNESS (OO)	DENSITY (g/cm³)
CoolTherm® SC-2000 SLW	Silicone	2.0	65	2.0
CoolTherm SC-3000 LD	Silicone	3.0	75	2.4
CoolTherm SC-1600	Silicone	3.7	89	3.3
CoolTherm UR-2000	Urethane	2.0	D55	2.6

- Two-Component
- Low Outgas Options
- Room Temperature and Heat Curing
- Electrically Isolative
- 1:1 Mix Ratio
- Protect Against Shock
- Damp Vibration

Adhesives

Formulated for MMD equipment, our thermally conductive adhesives provide rigidity and structural integrity.

ADHESIVES

PRODUCT	CHEMISTRY	THERMAL CONDUCTIVITY (W/m·K)	LAP SHEAR STRENGTH (MPa)
LORD® AC-902 LC	Acrylic	–	15 on nickel-plated steel
CoolTherm TC-2002	Acrylic	1.0	15.8 on aluminum
LORD 5206/55GB	Acrylic	–	19.3 on aluminum
LORD 852S/25GB	Acrylic	–	18.1 on aluminum

- Variable Cure Speeds
- Electrically Isolative
- Improve Design Flexibility
- Reduce Complexity
- Room Temperature or UV Cure

Coatings

Depend on strong, cost-effective coatings to provide insulating barriers around electric truck batteries and motors.

COATINGS

PRODUCT	CHEMISTRY	THERMAL CONDUCTIVITY (W/m·K)	DIELECTRIC STRENGTH (kV/mm)	TEMPERATURE RANGE (°C)
LORD JMC-700K	Epoxy	0.4-0.5	100 @ 50 µm	-40 to +180
Sipiol® UV	Acrylic	0.2-0.5	>90 @ 100 µm	-40 to +120

- Heat and UV Curing
- Electrically Isolative
- High Adhesion and Flexibility

Potting & Encapsulants

Our potting and encapsulants facilitate optimum heat transfer because of their high thermal conductivity and low viscosity.

POTTING

PRODUCT	CHEMISTRY	THERMAL CONDUCTIVITY (W/m·K)	VISCOSITY (cP @25°C)	DENSITY (g/cm³)
CoolTherm EP-3500	Epoxy	3.3	8000 @ 60°C	3.0
CoolTherm SC-324	Silicone	4.0	30,000	3.2
CoolTherm UR-389	Urethane	0.7	14,000	1.5

- Room Temperature and Heat Curing
- Electrically Isolative
- 1:1 Mix Ratio
- Improve Performance
- Protect Electronics
- Reduce Component Stress

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