



LORD® Engineered Adhesives:
Structural Adhesive Solutions for Industry.

LORD

Ask Us How™

MARKETS & APPLICATIONS



LORD® Structural Adhesives: **The best solution.**

By applying unique expertise in chemical, material sciences and mechanical dynamics, LORD® develops, manufactures and markets innovative adhesives, coatings and motion management solutions. Our products are designed to improve our customer's competitiveness.

With more than 40 years worldwide experience in engineered adhesives and a broad line of Acrylics, Epoxies and Urethanes, we successfully serve markets like transportation, general industry, sign, construction components and marine.

LORD® Engineered adhesives are a durable and attractive fastening solution replacing welds, rivets, clips, screws, tapes and bonding sealants. Compared to other traditional fastening methods, they offer design flexibility, simplified manufacturing processes, superior performance and cost saving.

LORD® Engineered Adhesives perform in demanding applications under severe loads: We have a long lasting experience in cladding panels, parabolic antennas, traffic or commercial sign bonding, train and tram fitting, boat deck to hull bonding, machinery panels attachment, panels reinforcements, speciality vehicles fitting and many others.

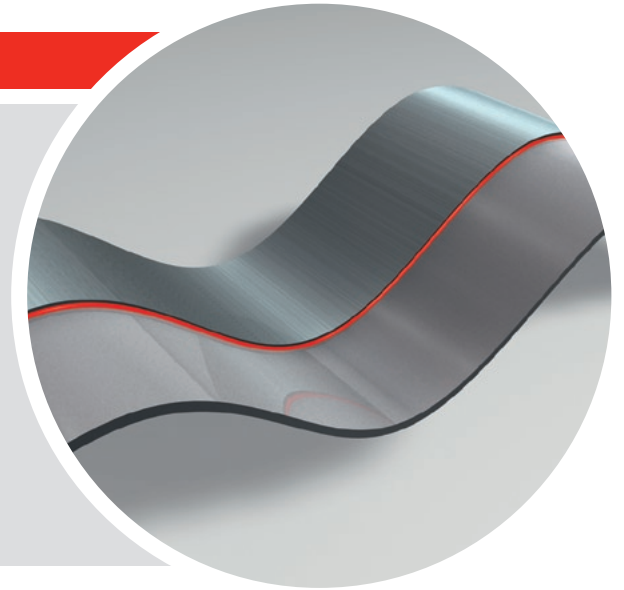
Working beside you, our account managers and engineers identify the adhesive that best meets your needs and helps you in specifying and developing a turnkey solution.

Finally, being a global company; LORD® can support you in any of your worldwide locations.

Please, find out about our products benefits in the following page.

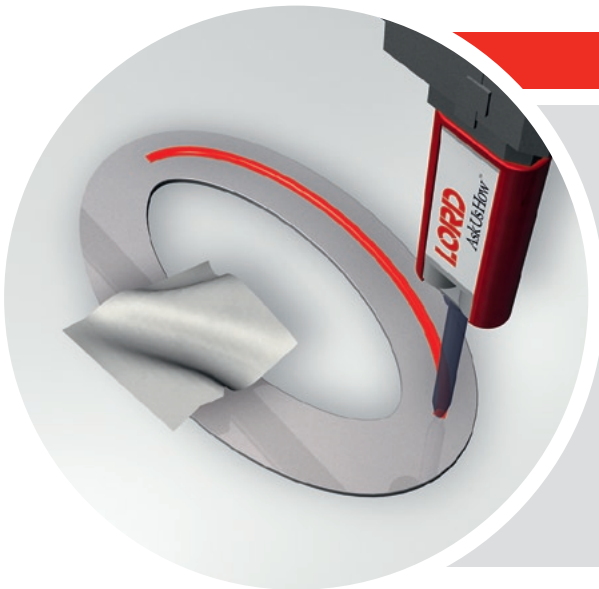
IMPROVE YOUR DESIGN!

- ✓ Wide variety of materials
- ✓ Lighter materials
- ✓ Dissimilar materials
- ✓ Innovative materials
- ✓ Less stiffeners
- ✓ Complex shapes
- ✓ Aesthetic
- ✓ Reduced costs



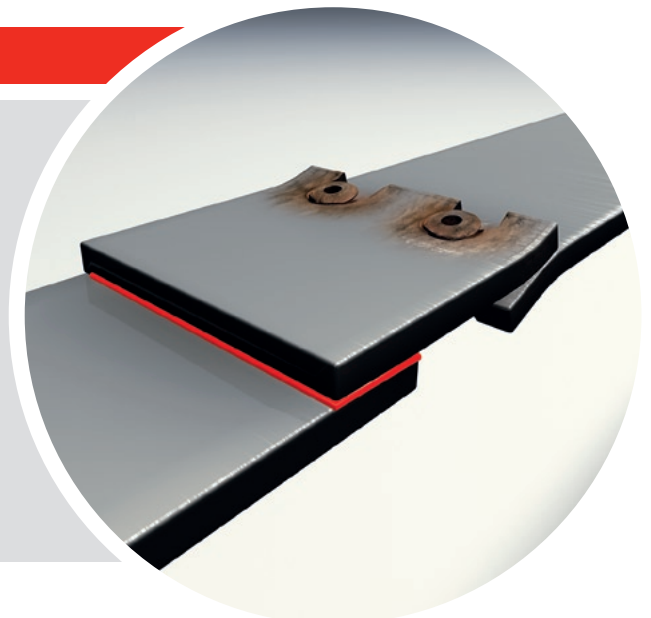
IMPROVE YOUR PROCESS!

- ✓ Simple surface preparation
- ✓ Manual or automatic application
- ✓ No thermal or mechanical damages
- ✓ Repositioning possible
- ✓ Wide choice of open and handling times
- ✓ Bond and seal in a single operation
- ✓ Compatible with powder coating
- ✓ Curing not dependent on moisture or heat



IMPROVE YOUR PERFORMANCE!

- ✓ High mechanical strength
- ✓ Proven fatigue resistance
- ✓ Reduces vibration and noise
- ✓ Excellent impact strength
- ✓ Excellent temperature resistance
- ✓ Proven Chemical / UV / Moisture resistance
- ✓ Excellent resistance to ageing
- ✓ No induced corrosion



LORD® PRODUCT SELECTOR

DESIGN SUBSTRATES

	PRODUCT	COLOR	DESIGN SUBSTRATES		COATED/ PAINTED METAL	THERMOPLAST. PVC ABS PMMA PC	FRP POLYESTER DCPD VINYLESTER	SMC BMC	EPOXY CARBON COMPOSITES	WOOD/STONE RUBBER CERAMIC
			GALVANIZED STEEL	BARE METAL/ ANODIZED						
METAL	403	Tan/Black								
	406	Tan/Black								
	410	Tan/Black								
COMPOSITE / METAL	606	White								
	663	White								
PLASTIC / COMPOSITE	506	Cream								
	7542	Brown								
	7545	Brown								
	7550	Clear								
	7555	Bright White								
	7556	Translucent								
MULTIPURPOSE	304	Grey								*
	305	Blue/Clear								*
	309	Blue-Green								*
	310	Grey								*
	312	Yellow								*
	320	Black								*
	363	Amber								*
	3170	Amber								*

* Rubber: Primer may be necessary: 459X or 7701 · Ceramic: Primer may be necessary: AP134

For unlisted substrates, please contact LORD®

PROCESS SPEED

	PRODUCT	OPEN TIME (min.)				HANDLING TIME (min.)					
		SHORT	MEDIUM	LONG	VERY LONG	SHORT	MEDIUM	LONG	VERY LONG		
METAL	403	2-4				4-6					
	406		6-10				12-17				
	410			20-45				60-120			
COMPOSITE / METAL	606		6-10				16-24				
	663			45-75				130-160			
PLASTIC / COMPOSITE	506	4-6					8-12				
	7542	4-7	11-15	20-30	50-60			60-120	180-240		
	7545	1-5	3-5	6-8	22-38	45-65	10	30	60	120-180	480-600
	7550	3-5							60		
	7555	3-5							60		
	7556	3-5							60		
MULTIPURPOSE	304				60-120					480-960	
	305				60-120					480-960	
	309				60-120					480-960	
	310			30-60				360-480			
	312				90-150					480-960	
	320			30-60				360-480			
	363	3-5				8-14					
	3170				120					1440	

PERFORMANCES MECHANICAL / ENVIRONMENTAL

	PRODUCT	SHEAR STRENGTH	PEEL STRENGTH	IMPACT	SERVICE TEMP. (°C)	UV	MOISTURE	CHEMICAL	ADDITIONAL FEATURES
METAL	403				-40/+150				Choice of accelerators
	406				-40/+150				Choice of accelerators
	410				-40/+150				Choice of accelerators
COMPOSITE / METAL	606				-40/+150				
	663				-40/+150				
PLASTIC / COMPOSITE	506				-40/+150				
	7542				-40/+100				
	7545				-40/+100				
	7550				-40/+100				Non yellowing
	7555				-40/+100				Non yellowing
	7556				-40/+100				Non yellowing
MULTIPURPOSE	304				-40/+120				
	305				-40/+120				Exist in FDA approved version
	309				-40/+120				
	310				-40/+204				HT version available
	312				-40/+120				
	320				-40/+120				
	363				-40/+120				Sandable, Paintable
	3170				-253/+80				Cryogenic application - Low outgassing

PROCESS RHEOLOGY

	PRODUCT	VISCOSITY (000 Cp)		
		FLUID	PASTE	NON SAG
METAL	403			100-280
	406			100-300
	410			100-350
COMPOSITE / METAL	606			100-300
	663			125-350
PLASTIC / COMPOSITE	506	20-70		
	7542	3-10**		after mixing
	7545			125-350
	7550	3-8		
	7555			80-200
	7556			70-250
MULTIPURPOSE	304		30-250	
	305	15-30		
	309			300-1000
	310		320-750	
	312	1-2		
	320			375-1500
	363	10-15		
	3170		60-120	

** Thixochemical-Product

How to use the selector

Start with the **Substrates table**.

Select adhesives compatible with both substrates to be bonded: Green boxes.

- Substrate families are organised in columns: bare metals, plastics, composites, etc.

- You can also use the line shortcuts: Metal bonders, Composite / Metal bonder, etc., to facilitate your search.

Continue with the **Performance table**.

Check if the pre selected references are likely to withstand application constraints: Green boxes.

- Mechanical behaviour
- Environmental behaviour

Refine and finalize your selection through the **Process tables**.

Finish refining your choice by identifying the references that best suit your process needs:

- Adhesive curing speed: Fast, medium, slow
- Adhesive rheology: Non sag, fluid, etc.

Product Chemistry

ACRYLIC

URETHANE

EPOXY

Information provided herein is based upon tests believed to be reliable. In as much as LORD® Corporation has no control over the manner in which others may use this information, it does not guarantee the results to be obtained. In addition, LORD® Corporation does not guarantee the performance of the product or the results obtained from the use of the product. Nor does the company make any express or implied warranty of merchantability or fitness for a particular purpose concerning the effects or results of such use. In all cases full product testing remains necessary.

TECHNICAL DETAILS

RESIN	ACCELERATOR	MIX RATIO	EUROPEAN STANDARD PACKAGING	APPEARANCE	MAIN USE
ACRYLICS					
LORD 403	LORD 17	10:1	50 ml / 490 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19	4:1	200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19B	4:1	50 ml / 415 ml / 200 kg	Black, non sag paste	Metal and Thermoplastic
	LORD 19GB	4:1	50 ml / 415 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
LORD 406	LORD 17	10:1	50 ml / 490 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19	4:1	200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19B	4:1	50 ml / 415 ml / 200 kg	Black, non sag paste	Metal and Thermoplastic
	LORD 19GB	4:1	50 ml / 415 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
LORD 410	LORD 17	10:1	50 ml / 490 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19	4:1	200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
	LORD 19B	4:1	50 ml / 415 ml / 200 kg	Black, non sag paste	Metal and Thermoplastic
	LORD 19GB	4:1	50 ml / 415 ml / 200 kg	Off white to tan, non sag paste	Metal and Thermoplastic
LORD 606	LORD 17	10:1	490 ml / 200 kg	Off white to white, non sag paste	Composite, plastic and metal
LORD 663	LORD 17	10:1	490 ml / 200 kg	Off white to white, non sag paste	Composite, plastic and metal
LORD 506	LORD 17	10:1	50 ml / 490 ml / 200 kg	Tan, medium viscosity paste	Thermoplastic

URETHANE					
LORD 7542A	LORD 7542B	1:1	50 ml / 20 kg / 200 kg	Brown liquid, brown paste after mixing	Plastic, Composite
	LORD 7542C	1:1	20 kg / 200 kg	Brown liquid, brown paste after mixing	Plastic, Composite
	LORD 7542D	1:1	20 kg	Brown liquid, brown paste after mixing	Plastic, Composite
	LORD 7542E	1:1	20 kg	Brown liquid, brown paste after mixing	Plastic, Composite
LORD 7545A	LORD 7545G	1:1	50 ml / 400 ml	Black non sag paste	Plastic, Composite
	LORD 7545B	1:1	50 ml / 400 ml	Off white or black non sag paste	Plastic, Composite
	LORD 7545C	1:1	50 ml / 400 ml	Off white non sag paste	Plastic, Composite
	LORD 7545E	1:1	50 ml / 400 ml	Off white non sag paste	Plastic, Composite
	LORD 7545F	1:1	50 ml	Off white non sag paste	Plastic, Composite
LORD 7550A	LORD 7550C	1:1	50 ml	Cristal clear liquid	Plastic, Composite
LORD 7555A	LORD 7555C	1:1	50 ml / 400 ml	Bright white non sag paste	Plastic, Composite
LORD 7556A	LORD 7556B	1:1	50 ml	Translucent non sag paste	Plastic, Composite

EPOXY					
LORD 304-1	LORD 304-2	1:1	1 kg / 4 kg / 20 kg	Gray paste	Multipurpose, FRP
LORD 305-1	LORD 305-2	1:1	50 ml / 4 kg / 20 kg	Clear blue liquid	Multipurpose, FRP
	LORD 307-2	1:1	20 kg	Clear liquid	Multipurpose, FRP
LORD 309-1D	LORD 309-2D	1:1	50 ml	Blue Green thixo paste	Multipurpose, FRP
LORD 310A	LORD 310 B	1:1	50 ml / 20 kg	Gray paste	Multipurpose, SMC
	LORD 310B BLACK	1:1	20 kg	Black paste	Multipurpose, SMC
	LORD 310B	3:2	50 ml / 20 kg	Gray paste	Multipurpose, SMC
LORD 312A	LORD 312B	1:1	4 kg	Yellow liquid	Multipurpose
LORD 320	LORD 310B BLACK	1:1	50 ml / 20 kg	Gray paste	Multipurpose, Rubber
LORD 363A	LORD 363B	1:1	50 ml	Amber liquid	Multipurpose
LORD 3170A	LORD 3170B	1:1	1 kg	Honey paste	Cryogenic

EQUIPMENT	
3019435	MIXER FOR 50ML CARTRIDGES : 4XX, 5XX, 6XX
3019436	MIXER FOR 415 AND 490 ML CARTRIDGES: 4XX, 5XX, 6XX - LONG
3019722	MIXER FOR 415 AND 490 ML CARTRIDGES: 4XX, 5XX, 6XX - SHORT
3019428	DISPENSING GUN FOR ALL 50ML CARTRIDGES
3018302	DISPENSING GUN FOR ALL 400ML, 415 AND 490ML CARTRIDGES
3004476	MIXER FOR 50ML CARTRIDGES 7XXX
3001178	MIXER FOR 400ML CARTRIDGES 7XXX
3001179	MIXER FOR COAXIAL 3XX CARTRIDGES
3019428	DISPENSING GUN FOR 50ML CARTRIDGES
3018302	DISPENSING GUN FOR LARGE CARTRIDGES: 415ML 490ML

FEATURES	SPEED	OPEN TIME (min.)	HANDLING TIME (min.)	VISCO 000 CP	SHEAR MPA*	TG (°C)	ELON-GATION**	SERVICE TEMP. (°C)
Excellent wetting, Multipurpose	Fast	2-4	4-6	100-280	16-23	72	30 %	-40/+150
Improved resistance to high temperature (powder coat)	Fast	2-4	4-6	100-280	16-23	72	30 %	-40/+150
Black version of 403/19	Fast	2-4	4-6	100-280	16-23	72	30 %	-40/+150
250 µm bondline thickness control version of 403/19	Fast	2-4	4-6	100-280	16-23	72	30 %	-40/+150
Excellent wetting, Multipurpose	Medium fast	6-10	12-17	100-300	16-23	72	30 %	-40/+150
Improved resistance to high temperature (powder coat)	Medium fast	6-10	12-17	100-300	16-23	72	30 %	-40/+150
Black version of 406/19	Medium fast	6-10	12-17	100-300	16-23	72	30 %	-40/+150
250 µm bondline thickness control version of 406/19	Medium fast	6-10	12-17	100-300	16-23	72	30 %	-40/+150
Excellent wetting, Multipurpose	Medium slow	20-45	60-120	100-350	16-23	72	30 %	-40/+150
Improved resistance to high temperature (powder coat)	Medium slow	20-45	60-120	100-350	16-23	72	30 %	-40/+150
Black version of 403/19	Medium slow	20-45	60-120	100-350	16-23	72	30 %	-40/+150
250 µm bondline thickness control version of 410/19	Medium slow	20-45	60-120	100-350	16-23	72	30 %	-40/+150
Low shrink	Fast	6-10	16-24	100-300	16-18	107	12 %	-40/+150
Low shrink	Slow	45-75	130-160	125-350	16-18			-40/+150
Excellent wetting	Fast	4-6	8-12	20-70				-40/+150

For MMD machine use, gravity-fed	Fast	4-7	60-120	3-10***	14-16		90 %	-40/+100
For MMD machine use, gravity-fed	Medium fast	11-15	120	3-10***	14-16		90 %	-40/+100
For MMD machine use, gravity-fed	Medium slow	20-30	180	3-10***	14-16		90 %	-40/+100
For MMD machine use, gravity-fed	Slow	50-60	240	3-10***	14-16		90 %	-40/+100
Cartridge application, Multipurpose	Very fast	1.5	10	125-350	14-16			-40/+100
Cartridge application, Multipurpose	Fast	3-5	30	125-350	14-16			-40/+100
Cartridge application, Multipurpose	Medium fast	6-8	60	125-350	14-16			-40/+100
Cartridge application, Multipurpose	Medium slow	22-38	120-180	125-350	14-16			-40/+100
Cartridge application, Multipurpose	Slow	45-65	480-600	125-350	14-16			-40/+100
Fast sealing, non yellowing	Fast	3-5	60	3-8				-40/+100
Fast sealing, non yellowing	Fast	3-5	60	80-200				-40/+100
Fast sealing, non yellowing	Fast	3-5	60	70-250				-40/+100

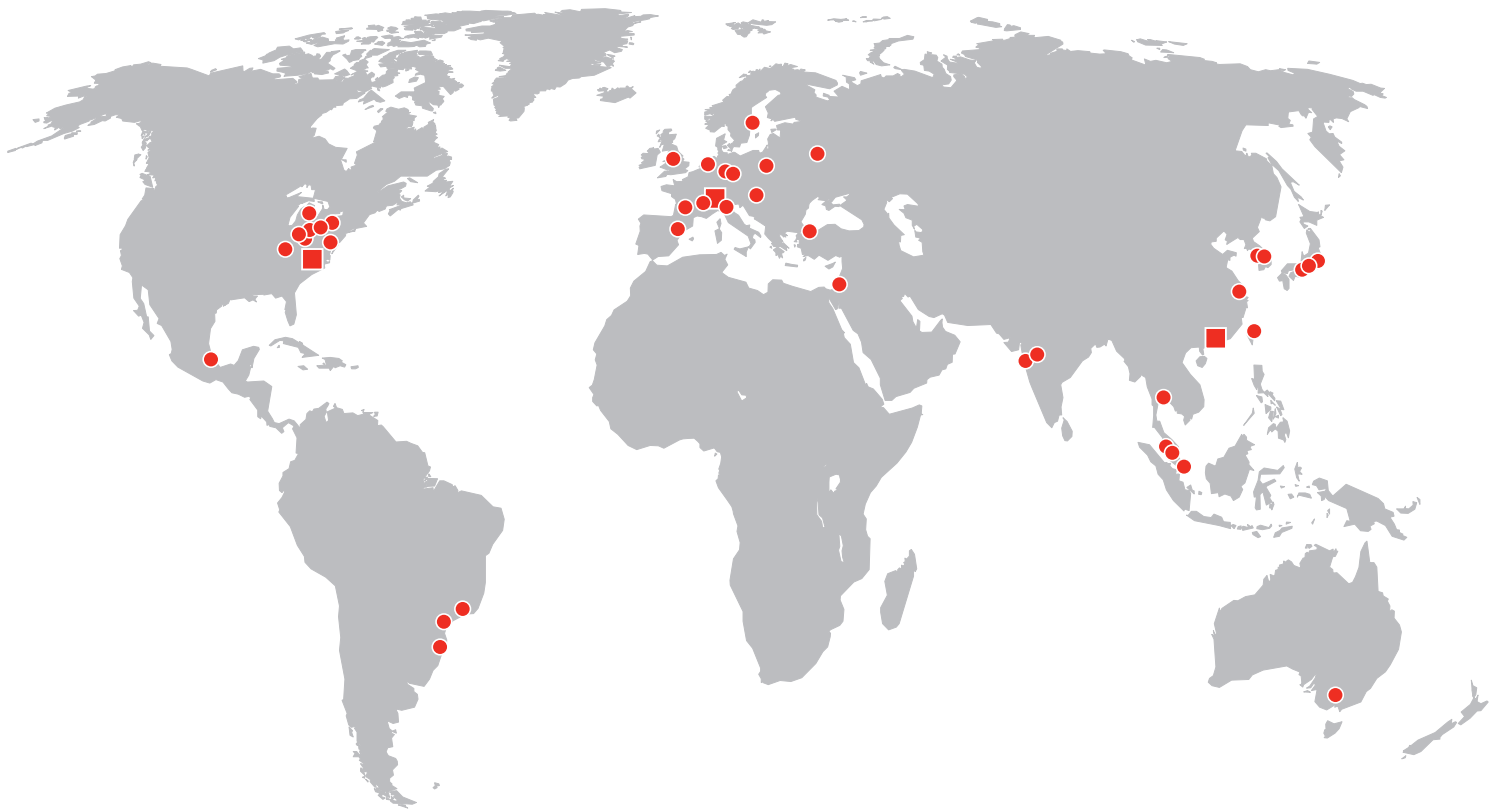
General purpose	Slow	60-120	480-960	30-250	16-20	56	10 %	-30/+120
Large surface, Flexible	Slow	60-120	480-960	15-30	14-15	61	31 %	-30/+120
Large surface, Flexible, FDA approved	Slow	60-120	480-960	15-30	14-15	61	31 %	-30/+120
General purpose	Slow	90-120	480-960	300-1000	16-20	70	6 %	-30/+120
General purpose	Medium	30-60	360-480	320-750	16-20	60	2 %	-40/+150
General purpose	Medium	30-60	360-480	320-750	16-20	60	2 %	-40/+150
Very High Temperatures	Medium	30-60	360-480	320-750	16-20	80	2 %	-40/+204
Potting, Large surface, High elongation	Slow	90-150	480-960	1-2	12-14	50	56 %	-30/+120
Tough	Medium	30-60	360-480	375-1500				-40/+150
Sandable, Paintable	Fast	3-5	8-14	8-12				-30/+120
Multipurpose	Very slow	120	1440	60-120	18-20			-253/+80

PRIMER	APPEARANCE	FEATURES
LORD AP134	Clear, light straw yellow liquid	Glass and Ceramic primer
Chemlok 459X	Amber liquid	TPE, TPO and EPDM primers
LORD 7701	Cloudy liquid	Vulcanized rubber

* Typical cohesive strength

** Elongation at break

*** Thixochemical Products: fluid before mixing, non sag after



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