Rubber-to-Substrate Adhesives for the Industry

KA&ME LOCK

AUTOMOTIVE

Automotive OEM Assembly
Tier Component Assembly
Heat Protective Coatings · Aftermarket Repair

TRUCK, BUS & OFF-HIGHWAY

Agriculture
Construction & Mining Equipment
Material Handling · Bus and Truck

INDUSTRY

Transportation · Construction Components
Signs · Metal Working
General Industry

ELECTRONICS

Component Assembly · Industrial Lighting
Printed Electronics Industries · Energy · Protection &
Conductive Materials for Automotive Microelectronics

AEROSPACE & DEFENSE

Active Vibration Control & Balancing Systems
Bearings & TT Straps · Isolators & Mounts
Dampers · Lightning Strike Protection · MRO

ENERGY

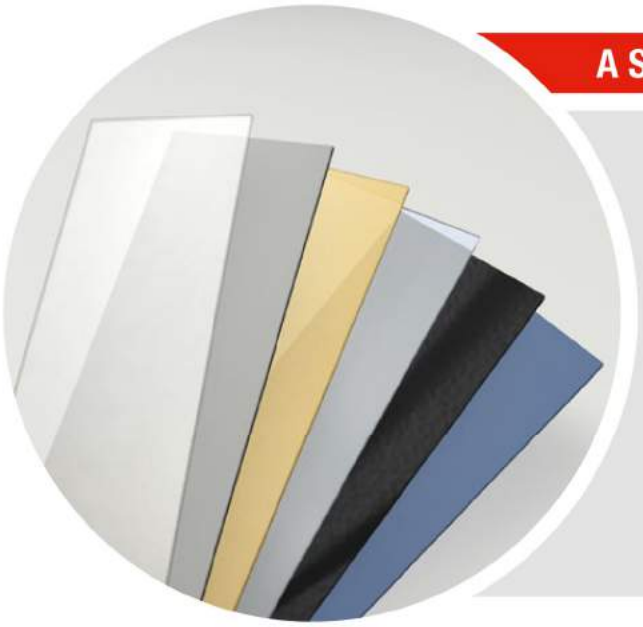
Oil & Gas
Solar & Wind

KA&ME LOCK

Leading adhesives for the industry.

A SOLUTION FOR EVERY PROCESS

- Solvent- and water-based
- One-coat and two-coat systems
- Spray, dip and brush
- Low- and high-pressure solutions
- Low- and high-temperature solutions
- Low mold fouling, high hot-shear resistance
- Excellent prebake resistance



A SOLUTION FOR EVERY ELASTOMER TO SUBSTRATE

- Natural Rubber
- Hydro Nitrile
- Hydrogenated Nitrile
- Chloroprene
- Butyl
- Ethylene/ Propylene/Diene
- Epichlorohydrin
- Ethyleneacrylic
- Fluorocarbon
- Styrol Butadiene
- Urethane
- Silicone (peroxide cured)

A SOLUTION FOR EVERY ENVIRONMENT

- High service temperature
- Salt spray and boiling water resistance
- High shear resistance
- High peel resistance
- Bond strengths that surpass cohesion and resistance of elastomers
- Excellent glycol and other organic fluids resistance

KA&ME LOCK

Elastomer Property Evaluation

Legend

1	Excellent
2	Good
3	Fair
4	Poor

	Elastomers														
	Natural Rubber	Isoprene, Synthetic	Styrene-Butadien Copolymer	Polybutadiene	Polychloroprene	Ethylene-Propylene-Diene Monomer	Butyl Rubber	Chlorosulfonated Polyethylene	Polyurethane	Acrylonitrile-Butadiene Copolymer	Hydrogenated Nitrile	Polyacrylate	Ethylene-Acrylate Ester	Silicone	Fluoroelastomer
	NR	IR	SBR	BR	CR	EPDM	IIR	CSM	AU/EU	NBR	HNBR	ACM	AEM	MQ	FKM
Physical Properties															
Tensile Strength	1	1	2	2	1	2	2	2	1	2	2	3	2	4	3
Elongation	1	1	2	2	1	2	1	2	1	2	2	3	3	1	3
Compression Set	3	3	3	3	2	2	3	2	2	2	2	2	2	1	1
Resilience	1	1	2	1	1	2	4	2	1	2	2	3	3	2	4
Electrical Resistivity	1	1	1	1	2	1	1	1	2	3	3	2	2	1	2
Mechanical Resistance															
Tear	1	1	2	2	1	3	2	1	1	2	2	3	3	3	3
Abrasion	1	1	1	1	1	2	2	2	1	1	1	3	3	4	3
Cut Growth	1	1	2	3	2	2	1	2	2	2	2	3	3	4	4
Temperature															
Heat Resistance	4	4	3	4	3	2	2	3	3	3	2	2	2	1	1
Low-Temperature Resilience	2	2	3	1	3	3	3	3	3	3	3	4	3	1	4
Service Performance															
Water	1	1	2	1	2	1	1	2	2	2	2	3	2	1	2
Acid	2	2	2	2	2	1	1	2	3	2	2	3	3	4	2
Alkali	2	2	2	2	2	1	1	1	3	2	2	3	3	4	2
Aliphatic Hydrocarbons	4	4	4	4	2	4	4	2	2	1	1	1	2	2	1
Aromatic Hydrocarbons	4	4	4	4	4	4	4	1	3	2	2	3	3	3	1
Chlorinated Solvents	4	4	4	4	4	4	4	1	2	4	4	4	4	3	3
Ketones	4	4	4	4	4	2	2	4	4	4	4	4	3	3	4
Alcohols	2	2	2	2	2	2	1	2	2	1	1	4	4	2	2
Lubricating Oils	4	4	4	4	2	4	4	4	2	1	1	1	2	2	1
Synthetic Oils	3	3	4	3	4	3	3	4	4	2	2	2	2	3	2
Hydraulic Fluids	4	4	4	4	3	2	3	3	4	3	2	2	2	4	2
Fuels	4	4	4	4	3	4	4	3	2	1	1	1	2	3	1
Weather	3	3	3	3	2	1	1	1	1	2	1	1	1	1	1
Oxidation	4	4	3	4	3	2	2	3	3	3	2	2	2	1	1
Ozone	4	4	4	4	2	1	1	1	1	4	1	1	1	1	1

MARKETS & APPLICATIONS

TRANSPORTATION OFF-HIGHWAY

- Vibration damping
- Gaskets & seals
- Hoses
- Transmission belts
- Crawler tracks

OIL & GAS

- Annual BOP Packing Element
- Drilling heads
- Valves
- Stators
- Gaskets & seals
- Marine Rubber Fenders

MINING EQUIPMENT

- Pumps
- Conveyor belts
- Tank linings
- Rubber Linings
- Rubber Mill Liners
- Rubber Hydrocyclone

WATERWORKS & CHEMISTRY

- Pumps
- Pipe linings
- Tank linings
- Valves
- Gasket & seals

CONSTRUCTION

- Expansion joints
- Seismic pads
- Bridge bearings (Neoprene)
- Lead Rubber Bearnig (LRB)
- High Damper Rubber Bearing
- Bridge Expansion Joints

ELECTRICAL & ELECTRONIC

- Insulators
- Cables
- Connectors
- Sensors

GENERAL INDUSTRY

- Rollers
- Castors
- Wheels
- Solid tires
- Port fenders

KA&ME LOCK

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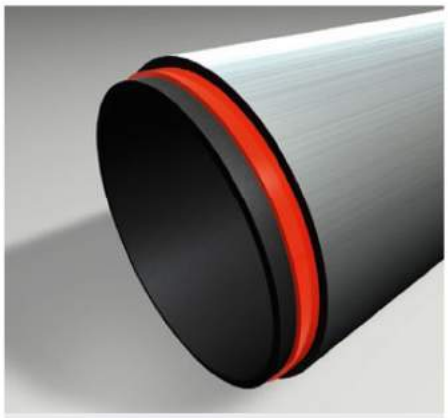
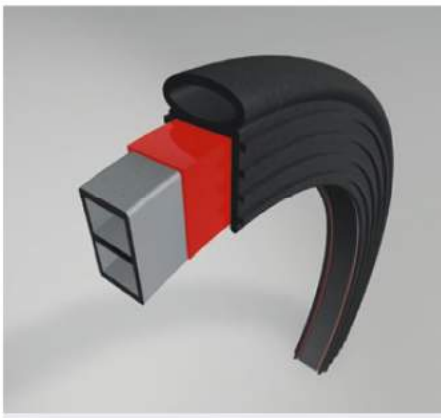


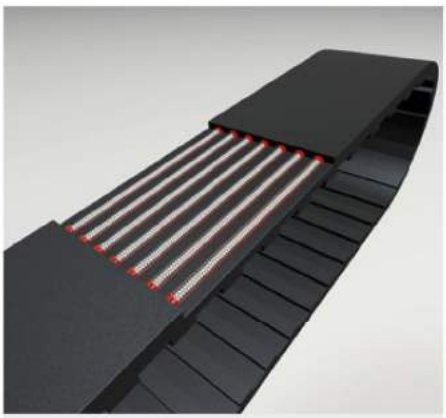
PIPE & TANK LINING

VALVES

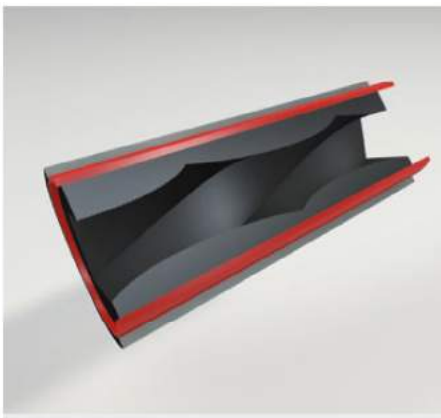


SEALS

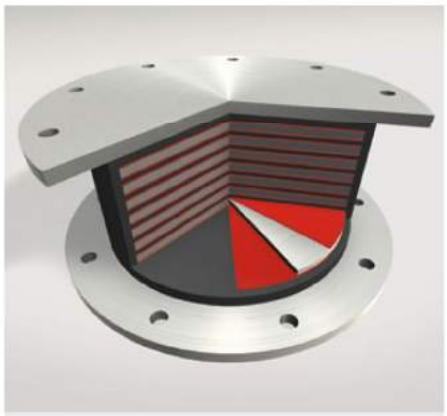
VIBRATION DAMPING



BELTS & CRAWLERS



STATORS

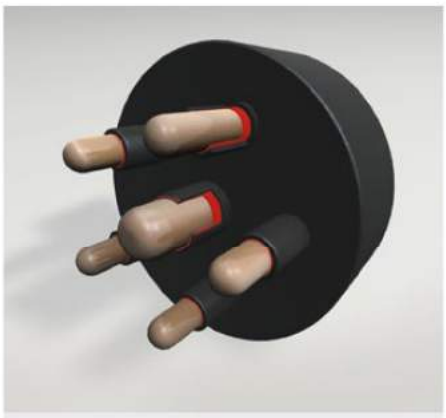


BRIDGE BEARINGS

EXPANSION JOINTS

ROLLERS

INSULATORS



CONNECTORS

HOSES

KA&ME LOCK

PRODUCT SELECTOR

SOLVENT BASED

ELASTOMER		TWO-COAT		ONE-COAT
		PRIMER	BONDING AGENT	
Natural Rubber	NR	KA & MELOCK MP 05	KA & MELOCK KM 20 KA & MELOCK KM 16	
Ethylene - Propylene - Diene (sulfur cured)	EPDM	KA & MELOCK MP 05	KA & MELOCK KM 16	
Ethylene - Propylene - Diene (peroxide cured)	EPDM	KA & MELOCK MP 05	KA & MELOCK KM 16	
Hydrogenated Nitrile	HNBR	KA & MELOCK MP 05	KA & MELOCK KM 16	
Nitrile	NBR	KA & MELOCK MP 05	KA & MELOCK KM 16 KA & MELOCK KM 20	
Chloroprene	CR	KA & MELOCK MP 05	KA & MELOCK KM 20 KA & MELOCK KM 16	
Butyl	IIR	KA & MELOCK MP 05	KA & MELOCK KM 20 KA & MELOCK KM 16	
Epichlorohydrin	ECO	KA & MELOCK MP 05	KA & MELOCK KM 16	
Ethylene Acrylic	AEM	KA & MELOCK MP 05	KA & MELOCK KM 16	
Fluorocarbon (bisphenol cured)	FPM			KA & MELOCK KM 28
Fluorocarbon (peroxide cured)	FPM			
Styrene Butadiene	SBR	KA & MELOCK MP 05	KA & MELOCK KM 20 KA & MELOCK KM 16	
Silicone (peroxid cured)	VMQ	KA & MELOCK MP 05		KA & MELOCK KM 28
Urethane (castable)	PU	KA & MELOCK MP 05		
Urethane (milliable)	PU		KA & MELOCK KM 16	
Urethane (thermoplastic)	TPU			

PRODUCT SELECTOR

AQUEOUS BASED

LORD CHEMOSIL	KA&MELOCK
CHEMOSIL 211	KA & MELOCK MP 05
CHEMOSIL NL 222	KA & MELOCK KM 12
CHEMOSIL 225	KA & MELOCK KM 20
CHEMOSIL NL 411	KA & MELOCK KM 16
CHEMOSIL 231 G	KA & MELOCK KM 19
CHEMOSIL 511	KA & MELOCK KM 28
CHEMOSIL 512	KA & MELOCK KM 22
CHEMOSIL 602	KA & MELOCK KM 14

KA&MELOCK


KA&ME LOCK

KA&MELOCK MP 05
Universal Primer

Description

KA&MELOCK MP 05 is an universal primer for KA&MELOCK Bonding Agents, suitable for use with Bonding Agents KA&MELOCK KM 12, KA&MELOCK KM 14, KA&MELOCK KM 16 and KA&MELOCK KM 19.

KA&MELOCK MP 05 provides the elastomer / metal bonding with excellent protection against water, corrosion and generally, against hydrolytic effects.

In addition, it results in superior dynamic and temperature stability. (An added feature obtained with KA&MELOCK MP 05 is resistance to technical greases and oils).

Even in the case or of hard-to-bond substrates, use of KA&MELOCK MP 05 facilitates achievement of excellent bond.

KA&MELOCK MP 05 lends itself exceptionally well to the one-coat bonding of Nitrile Rubber (NBR), widely for gasketing.

Technical Data*

Composition	Polymers and Fillers dispersed in Solvents
Colour	Grey
Viscosity 4 mm DIN-Cup	18 - 22 s
Specific Gravity	0,92 - 0,96 g/cm³
Flashpoint	18 °C
Solid Content	22 - 26 % by weight
Shelf life	24 months, in closed containers below 25 ° C.

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

Application

A suitably prepared substrate surface to obtain a stable sealing performance in terms of elastomer has a fundamental importance. All oil, grease and other soluble contaminants, the cleaner should be cleaned by cleaning with solvents or alkaline. Rust, sediment, and other insoluble impurities to be removed by mechanical or chemical methods. Sand blasting is the most commonly used mechanical methods. After mechanical cleaning of grease and abrasion caused by longer to clear the dust is strongly recommended that a second degreasing step.

The KA&MELOCK MP 05 primer can be applied by brush, dipping or spraying.

For the recommended wet coating thickness of approximately 50 - 60 µm, dry coating thickness of approximately 10 - 12 µm. The following dilution is recommended:

Brush	Undiluted
Dipping	Undiluted or 20 % dilution with MIBK
Spraying	40 – 60 % dilution with MIBK

Important

Undiluted KA&MELOCK MP 05 must be thoroughly stirred prior to application to assure homogeneity.

Diluted product must be stirred continuously to avoid sedimentation (separation).

When dry, KA&MELOCK MP 05 forms a grey film on the metal part, providing excellent corrosion protection.

Metal parts properly primed with KA&MELOCK MP 05 can be stored for several weeks in a clean environment.

KA&MELOCK KM 16
Universal Bonding Agent

Description

KA&MELOCK KM 16 is a very universal Bonding Agent.

When a high degree of corrosion and dynamic resistance is required, however, it should be applied in combination with KA&MELOCK MP 05 primer.

Even coating application with KA&MELOCK KM 16 provides good corrosion, oil and solvent resistance, the additional application of KA&MELOCK KM 16 + KA&MELOCK MP 05 primer particularly enhances corrosion and temperature resistance.

KA&MELOCK KM 16 is suitable for bonding of Polybutadiene (BR), Polychloroprene (CR), Ethylene Propylene Rubber (EPDM), Butyl Rubber (IIR), Polyisoprene (IR), Nitrile Rubber (NBR), Natural Rubber (NR) and Styrene Butadiene (SBR) to metals and plastics.

The combination of KA&MELOCK MP 05 + KA&MELOCK KM 16 is ideally suited for soft NR and NBR compounds in TM and IM production.

Technical Data*

Composition	Polymers and Fillers dispersed in Solvents
Colour	Black - Green
Viscosity 4 mm DIN-Cup	80 - 120 s
Specific Gravity	0,96 – 1,04 g/cm³
Flashpoint	27 °C
Solid Content	24 – 28 % by weight
Shelf life	12 months, in closed containers below 25 °C.

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

Application

KA&MELOCK KM 16 can be applied by brush, dipping or spraying.

For the recommended coating thickness of approximately 15 µm.

The following dilution is recommended:

Brush	Undiluted
Dipping	Undiluted or 20 % dilution with Xylene
Spraying	40 – 60 % dilution with Xylene

Important

Undiluted KA&MELOCK KM 16 must be thoroughly prior to application to assure homogeneity.

Diluted product must be stirred continuously to avoid sedimentation (separation).

When dry, KA&MELOCK KM 16 forms a black - green film on the metal part, providing excellent corrosion protection.

Metal parts properly primed with KA&MELOCK KM 16 can be stored for several weeks in a clean environment.

New Product

KA&MELOCK KM 20
Universal Bonding Agent

Description

KA&MELOCK KM 20 is an universal Bonding Agent developed for high temperature resistance Rubber/Metal bonding. KA&MELOCK KM 20 by formulation does not contain lead compounds.

KA&MELOCK KM 20 bonds different rubber based on Polybutadiene (BR), Chloroprene Rubber (CR), Butyl (IIR), Polyisoprene (IR), Nitrile (NBR), Natural (NR) and Butadiene-Styrene Copolymer (SBR). With primer KA&MELOCK MP 05 give the bonding parts excellent corrosion temperature and glycol resistance.

The bonding system KA&MELOCK MP 05 + KA&MELOCK KM 20 give excellent result for high dynamical and high temperature stressed Rubber/Metal parts.

Technical Data*

Composition	Polymers and Fillers dispersed in Solvents
Colour	Green - Black
Viscosity 4 mm DIN-Cup	45 - 70 s
Specific Gravity	0,95 – 1,01 g/cm³
Flashpoint	24 °C
Solid Content	22 – 27 % by weight
Shelf life	12 Months, in closed containers below 25 °C.

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

KA&MELOCK

New Product

Application

KA&MELOCK KM 20 can be applied by brush, dipping or spraying.

For the recommended wet coating thickness of approximately 70 - 100 µm, dry coating thickness of approximately 15 µm.

The following dilution is recommended:

Brush	Undiluted
Dipping	Undiluted or 20 % dilution with Xylene
Spraying	40 - 60 % dilution with Xylene

Important

Undiluted KA&MELOCK KM 20 must be thoroughly stirred prior to application to assure homogeneity.

Diluted product must be stirred continuously to avoid sedimentation (separation).

When dry, KA&MELOCK KM 20 forms a solid, dry, black film.

Coated parts can be stored for several weeks in a clean environment.

A&MELOCK Global Presence

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