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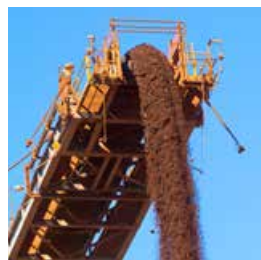
surface protection

Mining and Construction Industry

Quarrying, Raw Material Exploitation, Concrete Processing,
Civil Engineering, and Tunnelling

MetaLine® Series 700

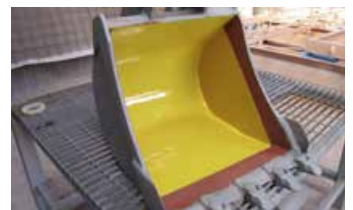
**Sprayable, Elastomeric Repair Systems
and Protective Coatings
against erosion, corrosion,
and wear**



Equipment Life: Extended. Since 1960 – Made in Germany

MetaLine® Series 700
Wear Protection Technology for the
repair of damaged rubber linings
and elastomeric in-situ coatings of
metal structures

Wear protection
Erosion protection
Corrosion protection
Non-stick function
Service life extension
Shock absorption
Noise deadening



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surface protection

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MetaLine® Series 700

Rubber-like sprayable wear protection to solve erosion, corrosion, and wear problems directly on-site

Rubber is a proven wear and corrosion protection technology, however, with seams that can fail, restricted repairability, and its equipment need for vulcanization, rapid in-situ lining is generally not possible. Epoxy ceramic products are often used when repairs need to be made, but replacing rubber with plastic based composites is a questionable approach for an effective repair ...

MetaLine Series 700 is an elastomeric product that combines the efficiency and performance of vulcanized rubber coatings and the simple processing of polymerics with the resistance of duplex steel. Additionally, our innovative Cartridge Spray Application (a breakthrough for the long-term protection of metal structures!) allows the product to be directly applied on-site seamlessly, rapidly, and professionally.

By means of the MetaLine APPLICATOR S-700, the cartridge packaged polymer is mixed and sprayed simultaneously. The result is a hydrodynamic resistant protective coating that provides unparalleled erosion resistance. Its durability is several times higher in comparison with conventional wear protective rubber linings!

MetaLine Series 700 technology is unique because of its simple spray application process, extraordinary surface smoothness, and resultant improvement in flow dynamics. Efficiency increases of up to 3.5 % have been proven.

The MetaLine process is suitable for the protection of complete metal components as well as the repair of existing rubber linings & parts.



Daily maintenance routine – irreparable with traditional technologies. A situation no field technician desires ...



... and that's the way it should be! The **MetaLine resurfacing technology**: repairs extending the durability of original spare parts and offering lower maintenance costs.

For more than 50 years

MetaLine looks back on more than 50 years of experience when it comes to repairing, protecting, and maintaining stressed equipment. Our products have become OEM (Original Equipment Manufacturer) Standard in many different industries.

When handling our coating materials, we place great importance on expert instruction, customer communication, and Know-How-Transfer. To realize this objective, we offer periods of instruction that range from one day to several days at our location or yours – worldwide! Video & project support is available at any time.

MetaLine has its headquarters located near Stuttgart (Southern Germany), and through our sales partners, we are represented in more than 70 countries.

Our experienced trainers are at your disposal!
Do not hesitate to contact us!

Corrosion-resistant
Permanently elastic
Abrasion & Erosion-resistant
Sprayable and moldable
Shock-absorbing
Glide-enhancing or
Slip-resistant

The Material Properties

MetaLine Series 700 is a solvent-free two-component elastomer that can be applied by spraying, injection, or casting. Polymerization begins after 1 minute, so a coating thickness between 1 mm and 20 mm can be achieved without the material sagging, even on vertical surfaces. MetaLine Series 700 products can be used directly on-site in **almost any climatic conditions** (even in extremely high humidity/temperature).

MetaLine Series 700 adheres to **most substrates** including steel, alloys, aluminium, rubber, concrete, wood and many plastics. It is not necessary to heat the components to be coated. After 5 minutes the coating is dry to the touch and most treated parts can be put into service about 24 hours later (at 20 °C). The temperature resistance is between -50 °C and +100 °C, depending on the relevant application.

MetaLine Series 700 cures without any tension or shrinkage. In addition to the chemical bonding process, it develops a mechanical **memory effect**. This permanently ties the coating to the substrate, thus counteracting any separation tendency that is normally associated with conventionally installed rubber sheets. MetaLine Series 700 can be recoated and repaired at anytime!

MetaLine Series 700 is provided in 3 different degrees of hardness

- **MetaLine 760 (60 Shore A)** serves to repair soft rubber linings and conveyor belt / splicing maintenance
- **MetaLine 785 (85 Shore A)** is the first choice for the protection of components subjected to wear, erosion or cavitation
- **MetaLine 795 (95 Shore A)** develops non-stick properties. Its ultra low coefficient of static friction prevents material bridging, e.g. in hoppers

MetaLine Series 700 coatings are **non-toxic**, safe to use, and have been assessed by US & EU authorities as drug and food-safe according to FDA standards and relevant EEC regulations.

The strength of MetaLine Series 700 lies in its erosion and cavitation resistance, which is comparable to high-alloy steels and armors. With a density of just 1.05 g/cm³, it is the **most lightweight duroplastic wear protection** available. The potential energy savings when applied to impellers and rotors is considerable.

The Application Process



MetaLine APPLICATOR S-700 with Series 700 Double Cartridges

Just 3 coatings steps!

The use of highly functional coatings requires competent **surface preparation**. The surfaces to be coated must be dry, clean, free of grease and salt, and have a **rough blasted surface profile**. The abrasive used must have a particle size of approximately 1-2 mm.

- 1 Metal substrates are coated with MetaLine 924 first. This **electro-chemically active corrosion protection** prevents borderline penetration on coating edges and protects partially damaged areas from rusting.
- 2 After drying, a double coat of MetaLine 900 Universal Primer on solid surfaces or MetaLine 910 on rubber surfaces is applied.
- 3 Finally, MetaLine Series 700 protective coating with the required film thickness and color is sprayed on!

A process created by professionals for professionals

- based on low-pressure technology (about 5 bars)
- only 200 liters of compressed air per minute required
- automatic dosing and mixing (no off-ratio)
- similar to wet-paint processing (however solvent-free)
- no mixed waste (similar to a 'DIY' spray can)
- re-use of opened cartridges
- **no equipment cleaning** after spraying
- designed for rough on-site working atmospheres
- investment costs below 1,000 EUR

The APPLICATOR S-700 does not come into contact with the coating material itself, so the tool does not require any cleaning or maintenance after the job is done.

General Mining

Sprayable elastomeric coatings for wear protection to be applied directly on site under adverse climatic conditions. Viscous, extremely tough and durable – can be repaired and overcoated at any time.

Fields of application:

- Spiral Classifiers
- Process Vessels
- Cyclones
- Separators



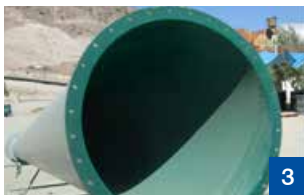
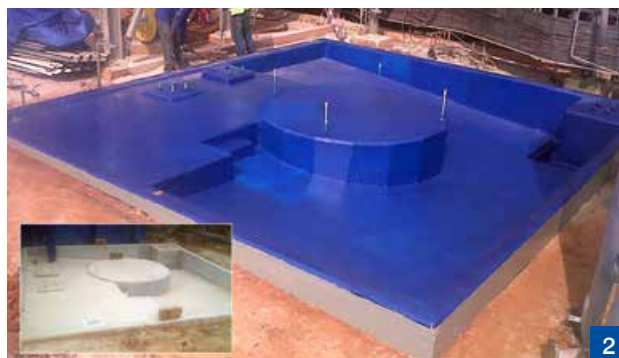
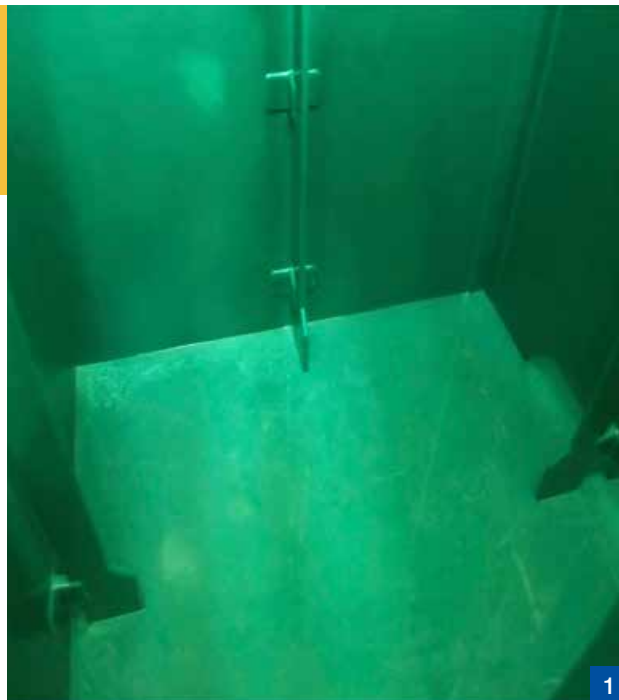
- 1 Durable corrosion protection – 3 mm MetaLine 785
- 2 MetaLine elastomers – unbeatable on complex surfaces
- 3 Coated on the spot with the cartridge gun
- 4 New, used or worn – a job for MetaLine
- 5 Innovative, long lasting surface protection
- 6 Resistant agitator protection for abrasive media (slurry)
- 7 MetaLine – adapted to every possible on-site situation

General Mining

Sprayable and completely seamless surface protection with rubber properties but without the need for vulcanization. Tear-resistant, impact-absorbing, and extremely tough against aggressive permanent stresses.

Fields of application:

- Agitators
- Magnetic Separators
- Process Tanks
- Collection Containers



- 1 Seamless spray rubber coatings without the use of machines ...
- 2 Directly from the cartridge to a concrete surface – leak-proof and permanently flexible
- 3 Smooth, flow-optimized, without seams – but nevertheless rubber
- 4 Impact-elastic MetaLine protected agitator
- 5 Eriez magnetic separator coated with MetaLine 785
- 6 On site, in the cold, a tough job – no problem for MetaLine
- 7 MetaLine in action on-site – extending equipment life since 1960

Flotation Accessories

Sprayable elastomeric coatings for rubber-like protection against grinding, scratching, impacting and abrasive stresses. Processable and operational within short periods of time.

Fields of application:

- Flotation Cells
- Distributors
- Screen Frames
- Thickeners



- 1 A solution not possible by using vulcanized rubber ...
- 2 Variable layer thicknesses are especially invaluable for pipe bends
- 3 More than color, more than rubber – a cutting edge protection solution
- 4 MetaLine stands its ground as OEM or repair product
- 5 Swift and professional repairs on flotation cells
- 6 The more complex the surface, the more apparent MetaLine's superiority
- 7 A reliable surface protection partner when it comes to lifetime extension

Flotation Tanks

Sprayable elastomeric liquid coatings. Duplex corrosion protection properties. Workable under high ambient temperatures and high humidity in-situ. Extremely wear-resistant and durable. Longer service life than rubber.

Fields of application:

- Flotation Cells
- Flotation Tanks
- Flotation Accessories
- Attritors (wet milling)



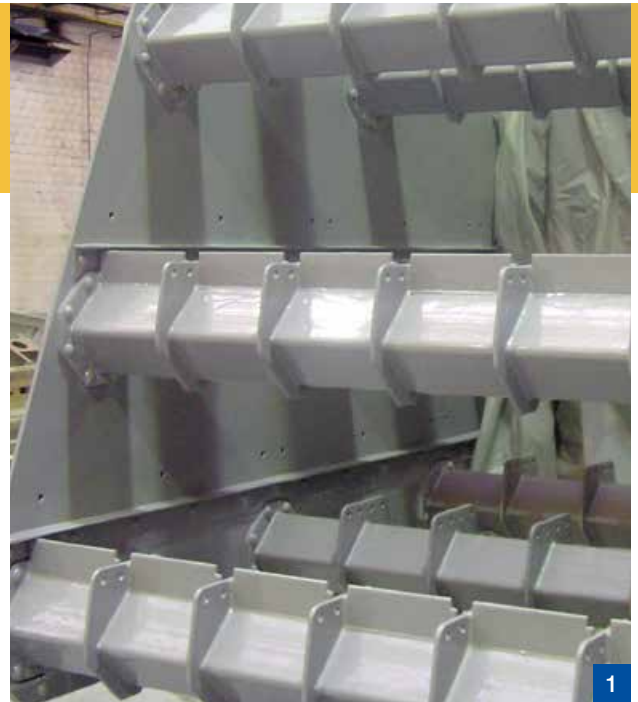
- 1 On-site repair coating even while installed
- 2 New lining by means of two-component spraying unit
- 3 Seamless and jointless elastomeric liquid lining
- 4 Resists striking, scratching, grinding, and flushing
- 5 Partial repair of a damaged rubber lining
- 6 Coating over several 1000 m² – that's also typical for MetaLine
- 7 MetaLine prefers to spray but brushable solutions are available as well

Screening Decks

Sprayable elastomeric coatings for wear and corrosion protection. Extremely resistant and smooth. Application is possible without any joints. Can be applied and repaired in-situ or in the open air.

Fields of application:

- Multi-Deck Screening Machines
- Sizers
- Rotary Screening Machines
- Hoppers
- Wet Screening Plants
- Curved Screening Frames
- Drum Screening Machines
- Vibrating Screens



- 1 Machine, for saltwater use, seamlessly rubber coated (in liquid form)
- 2 Coated on the inside and on the outside – an optimum protection concept
- 3 No edges, joints, or transitions for processing by means of spraying
- 4 Wear resistance comparable to rubber, processing as easy as painting
- 5 On surfaces not suited for rubber plates – MetaLine
- 6 Variable layer thickness as and when required and stress involved
- 7 Manufacturers world wide utilize MetaLine products as OEM

Reference: Wear protection in classification

Screening Frames / Filters

Sprayable elastomeric coatings for seamless liquid rubber coating. Protects, maintains, and safeguards the screening function.

Wear-resistant, easy to clean and vibration-resistant

Fields of application:

- Screening Frames
- Drum Screen Constructions
- Vibratory Screens



- 1 This solution is perfect when dimensional accuracy is a must
- 2 Spraying, protecting, functioning, reducing cost ...
- 3 Good wear protection can also be visually appealing ...
- 4 An unbeatable solution when it comes to construction: seamless, elastomeric
- 5 Elastomeric solutions not possible by using rubber
- 6 One special detail which makes the difference – MetaLine spray rubber coatings
- 7 Because nothing other than a spray-coating will suffice ...

Open Pump Impellers

Seamlessly sprayable elastomeric coatings for erosion protection. Resists high dynamic stresses. Extremely smooth surface. Optional with non-stick properties. Energy-saving and efficiency-increasing

Fields of application:

- Impellers of Mild Steel
- Impellers of Stainless Steel
- Impellers of Brass
- Impellers of PUR Elastomers
- Impellers of Rubber
- Impellers of Plastic



- 1 MetaLine – works for the most demanding applications
- 2 Coated brass cooling water pumps for seagoing vessels
- 3 Life-time extension and cost reduction thanks to MetaLine
- 4 The MetaLine spraying technology is suitable for any designs
- 5 Elastomeric long-term wear protection on sewage treatment plant pumps
- 6 Repaired pump impeller made of solid rubber
- 7 More than ever – pump manufacturers take MetaLine as OEM solution

Closed Pump Impellers

Seamlessly sprayable elastomeric coatings for life-time optimization. Especially resistant against erosion and cavitation. Low specific weight. Hydrodynamically optimized surface structure. Vibration resistant.

Fields of application:

- Impellers of Mild Steel
- Impellers of Stainless Steel
- Impellers of Brass
- Impellers of PUR Elastomers
- Impellers of Rubber
- Impellers of Plastic



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- 1 Reworked mining impeller with a chromium content of 28%
- 2 MetaLine – unbeatable when it comes to smoothness and evenness
- 3 Where a brush won't fit anymore, MetaLine shows its true value
- 4 Life-time extension by approximately 450% compared to grey cast iron
- 5 25 mm layer thickness on this suction dredger impeller
- 6 Up to 3.5% efficiency improvement compared to cast steel
- 7 MetaLine – nothing is lighter in weight and protects better

Pump Semi-Shells

Elastomeric repair and coating materials to be applied by spraying or by means of a trowel. Product life is greater than or equal to that of the original part. Extreme ecological sustainability by avoiding waste production and protection of resources.

Fields of application:

- Semi-Shells made of rubber
- Semi-Shells made of PUR elastomers
- Semi-Shells made of cast steel



- 1 Simple when it comes to repair – durable regarding its function
- 2 Active environmental protection by multiple part regeneration
- 3 Economical like a generic replacement, but reliable like OEM.
- 4 During assembly of a regenerated semi-shell
- 5 Metal semi-shell sprayed elastomerically in cold condition and in-situ
- 6 Piece weight 18 kg, repair requirement 2 kg = cost reduction
- 7 Do you have the technology to repair rubber or parts like this?

Spiral Pump Casing

Sprayable elastomeric coatings for substance preservation of machines under abrasive stress. Seamless, rubber-like material properties with extreme wear resistance. Efficiency improvement because of surface structures as smooth as so far unrivalled in pump design.

Fields of application:

- Casings made of grey cast iron
- Casings made of stainless steel
- Casings made of duplex
- Casings made of special alloys



- 1 Coated pump casing from paper production
- 2 Large pump casing coated with 2 mm MetaLine 785
- 3 Cooling water pump made of special alloys with a 8 mm thick lining
- 4 Seamlessly elastomerified – MetaLine's strength
- 5 Elastomeric properties for extreme toughness
- 6 Coated EGGER pump with 550 % life-time extension
- 7 Inexpensive, but still a long term solution

Submersible Pumps

Sprayable elastomeric coatings or Novolac coatings to be applied by brush or spray to protect inner and outer surfaces of submerged equipment against chemical, mechanical, abrasive and corrosive attacks. Self-processable, durable, and extremely economical.

Fields of application:

- Waste-water pumps
- Sewage treatment plant pumps
- Lifting pumps
- Bilge pumps
- Underwater pumps
- Submersible agitators
- Flow accelerators



- 1 Not only specially protected but also very decorative
- 2 Can be used on virtually any wetted parts
- 3 Efficiency improvement by perfecting surface qualities
- 4 Completely coated and thus seamlessly „wrapped“ in rubber
- 5 Suitable for casings, impellers, wear plates, and pipes
- 6 FLYGT impeller protected elastomerically and life-time optimized
- 7 A MetaLine specialist during spray operation

Slurry Pipes

Pourable and sprayable elastomeric coatings for long-term surface protection. Can be applied in any required layer thickness. Good chemical resistance. Free of metal, permissible for pure minerals. Also suitable for flange sealing.

Fields of application:

- Pipes
- Connectors
- Pipe bends
- Manifolds



- 1 Thick, seamless, wear-resistant, durable, proven
- 2 Longitudinally split pipe bends – the optimum wear protection
- 3 Locally increasing layer thickness – functional and cost-effective
- 4 Seamlessly elastomerified at the construction site with MetaLine
- 5 Seamless transition from the flange to the internal lining
- 6 MetaLine – the perfect solution for external protection
- 7 MetaLine increases the resistance of existing rubber linings

Screw Conveyors

Sprayable elastomeric coatings for combined corrosion and wear protection. Optionally with non-stick properties

Fields of application:

- Free-Wheel Screws (without pressure)
- Foundry Sand Recycling
- Elevators
- Tubular Screw Conveyors
- Tray Screw Conveyors
- Screw Dosing Devices
- Archimedean Screws



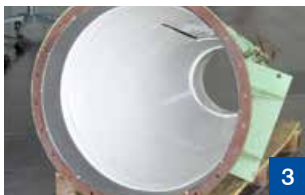
- 1 MetaLine – a well-known innovator in sewage technology
- 2 A design which can only be protected by spray coating
- 3 Smooth, even, efficient – and very elastic
- 4 A new generation of screw conveyor coatings
- 5 MetaLine coatings are completely metal-free
- 6 MetaLine ensures that nothing adheres or sticks
- 7 What protects the screw is suitable for the trough as well

Cyclones / Separators

Elastomeric coatings to be applied by spraying or trowel. For repairs of existing linings or complete installations on systems in danger of wear & tear. Suitable for high flow velocities. Impact and shock-resistant

Suitable for:

- Chip Vacuum Systems
- Centrifuges
- Decanter Housings
- Hydro Cyclones
- Turbo Separators



- 1 Seamless, rubbery surfaces without any joints or seams
- 2 MetaLine – unbeatable when it comes to complex surfaces
- 3 Smooth, without any surface tension and flow-optimized
- 4 Ability to be used for dry or wet separation
- 5 Can be repaired or over-coated at any time – on site
- 6 MetaLine – developed for increased conveying speeds ...
- 7 For complex geometries – where rubber is simply impractical

Heavy Trucks

Sprayable elastomeric useful coatings for substance and value preservation of special heavy truck bodies. Viscous, extremely resistant, always repairable in-situ. Waterproof, rot-proof, and long-lasting

Fields of application:

- Street Sweepers
- Dumpers
- Cattle Trucks
- Flatbed Trucks
- Construction Machine Transporters
- Bulk Transporters
- Airfield Supplying Vehicles
- Expedition Vehicles



- 1 Anti-stick properties ensure complete emptying
- 2 Proof of the legendary MetaLine resistance
- 3 Going through thick and thin – MetaLine expedition protection
- 4 Special coatings to optimize commercial vehicle functions
- 5 Transparent liquid rubber coating for expensive new devices
- 6 MetaLine – so that no snow can adhere and nothing can corrode
- 7 Not for rocks – but perfect for sand, clay, cement, ...

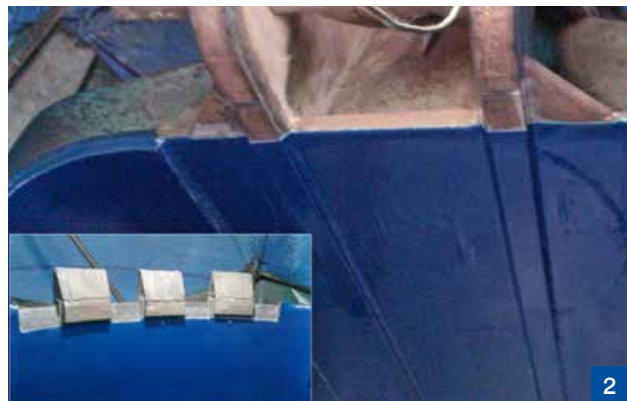
Earthmoving Equipment

If it sticks like “glue”, wear resistant non-stick coatings are a preferred solution to get back the efficiency of earth moving equipment.

The shape of the tools have no elementary influence in the coating function – that’s the benefit of MetaLine.

Fields of application:

- Excavators / loaders
- Excavator buckets (non-stick coatings)



- 1 Extremely difficult to realize – but there is no better alternative for drilling equipment
- 2 The smallest detail is of great importance – otherwise the coating will be off function
- 3 Suitable for clay and other extremely sticky substances
- 4 A positive side effect: fully corrosion resistant and preserves value
- 5 If worn out it is simply overcoated again – nothing easier exists
- 6 Non-stick, non-stick, non-stick – for other work, coated excavator buckets should not be used anymore
- 7 Any questions? Dial +49 (0)7034 3100-0 and our technicians will help you out immediately

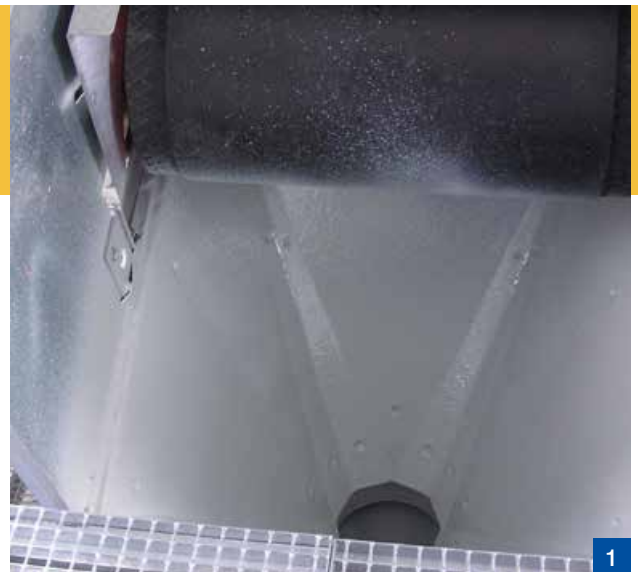
Concrete Processing

Sprayable elastomeric coatings for specific surface optimization when producing, storing, and transporting concrete.

Minimizes sticking, simplifies cleaning, reduces noise, and is extremely impact and wear-resistant

Fields of application:

- Concrete Molds (release oil reduction)
- Transport Troughs (cleaning reduction)
- Gutters / Buckets
- Troughs / Chutes
- Mixers (stationary / truck mixer)



- 1 Elastomers offer optimum protection in impact situations
- 2 Improves wear-resistance and cleaning, reduces noise
- 3 A typical area of application for MetaLine – seamless, soft, and wear-resistant
- 4 The mother of concrete processing – protected with MetaLine
- 5 Ensures complete sliding, helps to reduce cleaning time
- 6 MetaLine is at home in almost any wet mixing processes
- 7 Impressively fast and easy cleaning of a concrete trough

Concrete Molds

Extremely smooth elastomeric coatings with excellent mold release properties – in order to obtain perfect surface qualities. Wear resistant, precise in its shape and fully corrosion resistant.

The visual appeal of natural stone surfaces or graphical elements can be duplicated.

Fields of application:

- molds
- formworks
- sculptures
- surface decorations
- logos / graphical elements



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- 1 Easy to clean and ready to use again immediately after demolding – simply MetaLine!
- 2 Special concrete mold consisting out of 3 parts – MetaLine is capable of duplicating even the finest details
- 3 Coated mold to create a cavity – for a modular bridge construction concept
- 4 Resistant to release agent and durable against harsh outdoor conditions – even natural brick surfaces could be duplicated
- 5 MetaLine makes its unique product characteristics visible, particularly with complex geometries.
- 6 Construction elements like bricks can be produced faster and more accurately by use of MetaLine coated molds ...
- 7 No coating will last forever – however MetaLine will last definitely longer than other products and can be reapplied on-site

Drive Pulleys / Rollers

Sprayable elastomeric coatings for lining repairs or complete new coatings. Available hardnesses from 60 to 95 Shore A.

Fields of application:

- Drive Rollers (according to FDA pharma-quality)
- Vacuum Rollers
- Textile Rollers (drivers / rerouting)
- Transport Rollers
- Textile Beams
- Pulleys
- Friction Wheels
- Diabolo Rollers
- Cable Drums



- 1 In-situ elastomerification without machine processing
- 2 Seamless coating of individual parts with FDA pureness (24 h service)
- 3 Spraying technique for globular or diabolo geometries
- 4 Textile drive rollers with a static friction of up to 0.7
- 5 Coated drive roller with superimposed driving toothed wheel
- 6 Wear-resistant non-stick coating on conveyor belt rollers
- 7 Paper rollers can be machined to a precision of 1/100 mm

Fans / Blowers

Sprayable elastomeric wear protection and anti-stick coatings. Extremely low area weight (1.05 kg/m²/mm film thickness). Impact and especially erosion-resistant. Electrically non-conducting (CANNOT be used in EX areas)

Fields of application:

- Fan Blades / Housings
- Chip Extraction Systems or Blowers
- Pneumatic Conveyor Systems
- Chip Blowers
- Blade Housings
- Separator Blades
- Propellers / Impellers / Rotors



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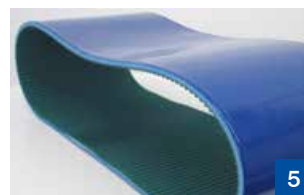
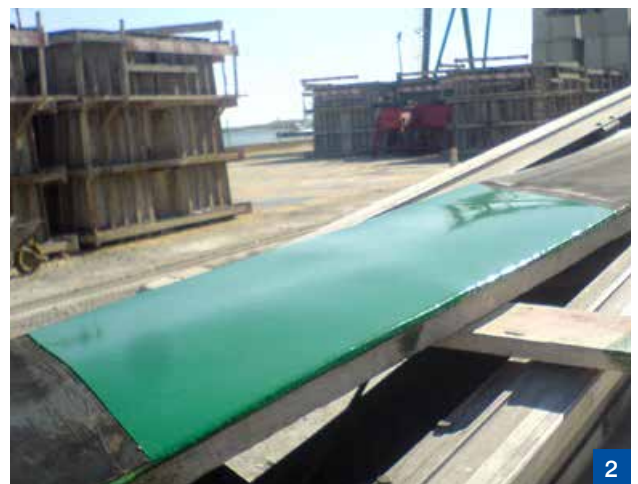
- 1 Fan blade with wear-resistant non-stick coating
- 2 Low area weights are an absolute must for rotors
- 3 MetaLine coatings are multifunctional and long-lasting
- 4 Seamless, rubber-like, and especially impact-resistant – MetaLine 795
- 5 No risk of distortion – cold-sprayed elastomeric layer
- 6 Variable in hardness, static friction, thickness, color, and structure
- 7 As non-stick coating in ventilators of automotive paint installations

Conveyor Belts

Elastomeric repair materials to be applied by troweling, pouring, or spraying. For partial repairs or constructive improvements. Rapid solidification, easy to process and wear-resistant.

Suitable for:

- Rubber belts
- Chain links (increase in static friction)
- Coating of splicing devices
- Elevator (buckets)
- Stamping bands (increased cutting resistance)



- 1 Carrying out in-situ repairs (without vulcanization being necessary)
- 2 Elastomeric coating is permanently flexible and provides protection for splicing areas
- 3 Repairing longitudinal cuts overnight
- 4 Liquid rubber applicable by trowel – a dream for every maintenance technician
- 5 FDA-compliant finishing of special belts
- 6 Changing belt properties (e.g. non-sticking) subsequently
- 7 MetaLine 760 – designed to help yourself on-site

Floating Hoses

Castable, trowelable, and sprayable repair compounds with permanent super-elastic characteristics. Can be applied in thick coats overhead or on vertical surfaces. Bonds very well to almost all industrially used rubber mixtures.

Designed to be applied under severe climatic conditions, even great heat or high atmospheric humidity. Reduces fouling and maritime growth. Resistant to environmental and marine impact. Ultra wear resistant to cover dredging and mining demands.

Fields of application:

- Hard Rubber Linings
- Soft Rubber Linings
- Natural Rubber Linings
- Polyurethane Linings
- Polyurea Linings



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- 1 Smoothly and perfectly to trowel – MetaLine 685
- 2 MetaLine is suitable for structures subjected to bending forces
- 3 A daily rubber repair demand – cracked linings
- 4 The prepared repair area masked with a reinforcement tape
- 5 Ready to go – after the application of only 1 kg MetaLine 785
- 6 MetaLine 685 applied in a single coat with 12 mm thickness
- 7 MetaLine preserves equipment values – inside and outside of floating hoses

Equipment Spares

The environmental impact of open pit mining is substantial, especially when it comes to rubber parts; lack of maintenance leads to a massive loss of resources and an unacceptable pollution of the landscape.

MetaLine Series 700 is a synthetic, elastomeric repair & coating compound designed to bring worn rubber equipment back into service, in most cases with lower costs and a significantly higher lifetime expectancy. Like in this particular repair case:

- Spare part costs 1.750,- EUR
- Repair costs 800,- EUR
- Repair time 6 hours
- Consumption 5 cartridges ML 785
- Expected lifetime double as spare-part
- Other savings 1 x disassembly & operational shut down



References and Photos:
Carmen Copper Corporation (Mining)
Toledo, Philippines

- 1 Erosion has led to leakage and the complete waste of this part
- 2 Back to life by means of the elastomeric MetaLine Series 700
- 3 Power washing prior the multi-step recovery procedure starts
- 4 Accurate roughening with the copper-carbide MetaLine tool
- 5 Between 4 and 50 mm MetaLine 785 have been sprayed/molded
- 6 The proud service crew has accomplished this work for Carmen Copper Corporation

OTR Tires

Elastomeric repair materials to be applied by trowel and also in pourable and sprayable form. High adhesive power and good mechanical resistance. Proven up to tire dimensions of 63". Usable on-site, partly without dismantling

Fields of application:

- Off-The-Road Tires
- Forklift Tires
- Construction Machines



- 1 Completely reworked and protectively coated sidewall
- 2 During repair measures (backfilling)
- 3 Local sealing (on the outside and on the inside)
- 4 Partial sidewall repair to prevent continued tearing
- 5 Effective preparation is a basic requirement
- 6 Relugged tread of a medium-weight paddle wheel loader
- 7 Due to safety reasons, the repair must be performed by trained specialists

MetaLine® Series 700 (760, 785, 795)

	MetaLine 760	MetaLine 785	MetaLine 795
Preferred usage (multi-purpose use is possible)	shock absorption rubber repairs noise deadening	wear protection erosion protection cavitation protection	non-stick character corrosion protection efficiency increase
Processing (spraying / casting / injecting)	APPLICATOR S-700	APPLICATOR S-700	APPLICATOR S-700
Solids content (DIN EN ISO 3251)	100 %	100 %	100 %
Mixing ratio (APPLICATOR S-700)	2 : 1 by volume	2 : 1 by volume	2 : 1 by volume
Consumption (theoretically per mm film thickness)	1.25 kg/m ²	1.20 kg/m ²	1.20 kg/m ²
Processing time (at ambient temperature)	7 min.	1 min.	1 min.
Solidification (at 20 °C – dependent on stress)	> 1.5 days	> 1 day	> 1 day
Hardness sprayed /cast on (A.S.T.M. D2240-68)	60 / 65 Shore A	82 / 85 Shore A	95 / 98 Shore A
Density (DIN 53 479)	1.10 g/cm ³	1.05 g/cm ³	1.05 g/cm ³
Tensile strength (A.S.T.M. D412-68)	20 N/mm ²	20 N/mm ²	24 N/mm ²
Tensile modulus at 100 % elongation (A.S.T.M. D412-68)	6 N/mm ²	7 N/mm ²	13 N/mm ²
Tear resistance (DIN 53 515)	68 N/mm	55 N/mm	68 N/mm
Elongation at break (A.S.T.M. D412-68)	650 %	380 %	275 %
Bashore resilience (DIN 53 512)	63 %	45 %	27 %
Coefficient of thermal conductivity (DIN 52 612)	0.2 W/K·m	0.2 W/K·m	0.2 W/K·m
Dielectric surface resistivity (DIN 53 482)	7 x 10 ¹⁰ Ohm	7 x 10 ¹⁰ Ohm	7 x 10 ¹⁰ Ohm
Dielectric breakdown voltage (DIN 53 841)	> 5 kV/mm	> 5 kV/mm	> 5 kV/mm
High temperature resistance (dry / wet)	+100 °C / +60 °C	+120 °C / +60 °C	+120 °C / +60 °C
Low temperature resistance (dry)	-50 °C	-50 °C	-50 °C
Abrasion according to Taber® (A.S.T.M. D1-044-73 - Rad H-22, dry, 1 kg, 1.000 U)	n.d.	8.2 mg	10.5 mg
Abrasion (DIN 53 516)	85 mm ³	55 mm ³	65 mm ³
Coefficient of static friction (DIN EN ISO 8295)	$\mu(0)$ = approx. 0.7	$\mu(0)$ = approx. 0.6	$\mu(0)$ = approx. 0.15
Approvals (Pharma & Food standards)	FDA 177.1680 (21) EU 1935/2004 EU 10/2011	FDA 177.1680 (21) EU 1935/2004 EU 10/2011	FDA 177.1680 (21) EU 1935/2004 EU 10/2011

And what about the cost effectiveness?

MetaLine is often more efficient and cost-effective than OEM replacement parts and longer lasting than other means of repair. When comparing prices with conventional synthetic repair methods (such as epoxy-ceramic or trowelable rubber repair grouts) the MetaLine technology is impressive, providing **cost savings of up to 60 %**. For example, 1 kg of MetaLine Series 700 covers almost 1 m² in a thickness of 1 mm. For an identical coverage of epoxy-ceramic, over 2 kg would be required!

For start-up users, we recommend the **MetaLine Onboard-Kit**. This fully equipped set comes in a functional aluminium transport box. It holds the SP-1 blasting gun plus blasting grit, APPLICATOR S-700, cleaning agent, primers, spare nozzles, mixing tools, brushes, gloves, masking tape and 10 kg of MetaLine Series 700 coating product. All of this comes with very **detailed Processing Instructions** and its pdf-Version (download only) contains additional video material for easier understanding.

The components have a shelf life of up to 2 years, so if the need arises, MetaLine can also be used as a viable method of repair.

MetaLine ensures that worn parts are not useless!



The complete MetaLine Onboard-Kit. Ready to start at any time, any place – by professionals for professionals ...

... from the Experts of Coating Technology

You will find MetaLine products used worldwide in various industries such as:

- Aeronautical Engineering
- Automation Technology
- Automotive Manufacturing
- Ceramics Industry
- Chemical Industry
- Concrete Production
- Conveyor Technology
- Electrical Engineering
- Fertilizer Production
- Foodstuff Processing
- Glass Processing
- Metal Foundries
- Mining Industry and Mining Technology
- Municipal Technology
- Nautical
- Occupational Safety
- Offshore & Marine
- Packaging Technology
- Petro-Chemical
- Pharmaceuticals
- Plastics Processing
- Power Plant Technology
- Pulp & Paper
- Recycling Technology
- Surface Technology
- Textile Machinery Design
- ... and much more

