

Elastomeric assembly coatings

Storage, Packaging, Transport, Handling, Gripping, Feeding, Separation, Control, Assembly, Automation, Robotics



MetaLine® Series 500/700

Durable protection against scratches, marks, stickiness, abrasion, noise & discoloration





with FDA conformity











Process Technology

MetaLine® Series 500 / 700

Duroplastic spray coatings for solving handling problems in feeding and assembly technology

MetaLine® has been involved in coating materials for active surface protection for over 60 years. The processes are leading in assembly automation and are recommended by almost all important European robotics OEM manufacturers ...

MetaLine® Series 500/700 consists of two elastomeric coating systems with feeding properties that are **individually adapted to the conveyed parts**. Why? Because a dry silicone ring requires different coating properties than an oily screw or a delicate plastic cap – whether in conveying, gripping, clamping, sorting or mounting!

During application, the following parameters are systematically aligned:

- Hardness
- Stiction
- Layer thickness
- Thickness profile
- Surface structure
- Electrical conductivity
- Color and contrast

60 to 98 Shore A

my(0) 0.1 to 0.7 slippery to slip-resistant

0.5 mm to 20 mm

E.g., partial bowl base reinforcements Mirror-smooth, velvety profiled or grained

Electrically insulating up to anti-static

White to black (glossy only)

This variable adjustment optimizes the conveying speed, prevents scratches and minimizes waste. A unique and outstanding MetaLine **quality feature**: No other lining method can influence surface properties more directly or precisely.

MetaLine® – a milestone in the **transport optimization** of bulk items!

Wear reduction
Scratch protection
Feeding optimization
Non-stick function
Service life extension
Shock absorption
Noise deadening



MetaLine® Series 500 – extremely variable, for the highest precision and individually adapted coatings up to about 1.5 mm coating thickness



MetaLine® Series 700 – extremely wear and impact-resistant for coating thicknesses starting from 1.5 mm, and simpler component geometries

MetaLine® coatings understand what sensitive parts require . . .



Application Areas

















MetaLine® coatings for the automation industry

Fast and cost-effective transport process optimization

- Vibratory bowl feeders
- Linear vibratory conveyors
- Spiral elevators
- Steep belt conveyors
- Multi-jaw grippers
- Vibratory hoppers
- Workpiece holders
- Tool pads
- Infeed chutes
- Ultrasonic welding frames
- Vibration welding frames
- Load hooks
- Workpiece magazine
- Drive rollers
- Hold-down devices
- Clamping tools
- Screw conveyors
- Dosing devices
- Tube conveyors
- Weighing scales
- Blister packaging machines
- Parts washers
- Assembly supports
- Pneumatc tools
- Stainless steel wire mesh trays
- Diabolo rollers
- Conveyor belts
- Guideways

FDA Conformity as per CFC 177.1680 (Title 21) EU No. 1935/2004

MetaLine is partner for many "Fortune 500" companies like:

ABB – Agfa – Airbus – Alstom – Audi – BHP Billiton - BMW – Boehringer – Böllhoff – Bombardier – Bosch – Bugatti – Coca-Cola – Continental – Dassault – Delphi – Fairchild – Faurecia – Feintools – Festo – Fiat – fischerwerke – Freudenberg Gilette – Hewlett-Packard – ITT – Johnson – Kraft Foods – Liebherr – Lufthansa – Kellogg – Krauss-Maffei – Magna MANdiesel – manroland – Mercedes-Benz – Metso – Nissan – Oerlikon – Pfizer – Playmobil – Porsche – Procter & Gamble PSA – Schaeffler – Siemens – SKF – Stihl – Swarovski – Thyssen Krupp – Toyota – Tyco – Volkswagen – Wacker Chemie Wrigley – ZF Friedrichshafen . . .





Vibratory Feeder Bowls

Reference: MetaLine® Series 500/700

Sprayable elastomeric coatings for optimizing conveying characteristics and noise reduction.

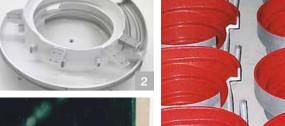
Series 500: For individually adapting the coating to the parts to be conveyed (e.g., oily, anti-static, non-stick, structured) or for complex geometries and custom tooled equipment.

Series 700: Optimally suited for simple structural bowl designs without complex tooling

- Vibratory feeder bowls
- Centrifugal feeders
- Stepped feeder bowls
- Cylindrical feeder bowls
- Conical feeder bowls
- Spiral elevators
- Tee nut feeders



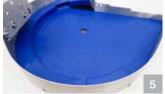














- MetaLine® Series 500 individually adapted to the parts to be feeded
- Optimized noise protection concept thanks to an all-around encapsulation
- MetaLine is the coating standard for automated screw feeding devices
- Regularity and seamlessness are the strengths of MetaLine®
- No more scratching and marking of sensitive parts to be conveyed
- Without seams, coatings can no longer partially disbond
- Technical detail solutions no other feeder bowl lining can offer

Vibratory Chutes

Reference: MetaLine® Series 500/700





Elastomeric surface treatment for lining longitudinal feeders. Parts protection, noise reduction, feeding optimization and general equipment lifetime extension. FDA approval for use in the pharmaceutical & food sector.

- Pipe conveyors
- Chutes / Slides / Trays
- Vibratory trough dosing devices
- Vibrating tables
- Linear feeding lines



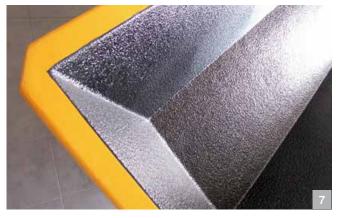








- 1 During the elastomeric spray process of MetaLine® Series 700
- 2 FDA conformity allows the use in pharmaceutical installations
- 3 MetaLine® textured surfaces will prevent sticking of oily parts
- 4 For the reduction of high impact forces creating maximum parts protection
- 5 Absolutely seamless lining even on very complex shapes
- 6 MetaLine is Europe's largest OEM coating supplier for automation items
- 7 Resistant up to maximum 120 °C hot parts impacting into the tray





Clamping / Gripping Tools

Reference: MetaLine® Series 500/700

Sprayable, elastomeric coatings to protect sensitive items during a handling process: Scratch protection, slip reduction, improving maneuvering stability. Surface friction index up to my(0) = 0.7.

- Multi-jaw grippers
- Hold-down / clamping tools
- Holding pliers
- Clamping pads / stops
- Girders
- Steady rests
- Shackle hitches / beams















- 1 Two-jaw gripper with a 2 mm thick protective "skin" avoiding marks
- 2 Part of a coated clamping collet for small delicate plastic parts
- 3 Slip-resistant nut insert to transfer torque without damages
- 4 Elastomeric gripper to hold sensitive tiny metal items
- 5 Coated pressure pads for chassis welding in vehicle construction
- 6 Miniature gripper with a only 1 mm thick "rubber lining"
- 7 Hook and gripper in one nevertheless perfectly protecting ...

Lifting Devices

Reference: MetaLine® Series 500/700





Soft touch coatings to improve grip and protect the load. Prevents scratches, markings, imprints or discolorations.

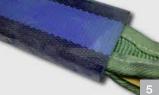
Conform to pharmaceutical and partially food grade specifications in accordance with FDA & EU regulations.

- Load hooks
- Eye hooks
- Forklift attachments
- Lashing straps
- Air cushion systems













- Slip-resistant and able to withstand high loads MetaLine® 785
- Coated forklift forks reliably fix the load and prevents damages
- 3 Hygienic, pharmaceutical approved and vibration dampening
- MetaLine® prevents scratches, slipping and chafing
- Protects against moisture penetration and injuries to the belt
- Available in many different tints and signal/warning colors
- Avoids scratching & marking plus secures the loading process



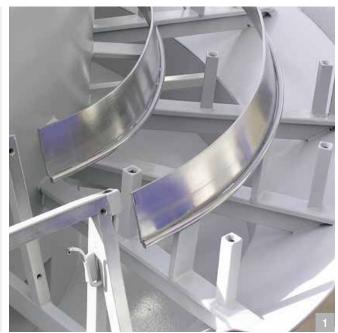


Pharmaceutical / Medical Engineering

Reference: MetaLine® Series 500/700

Sprayable elastomeric coatings with FDA 177.1680 (Title 21) conformity. Impact-resisting, seamless, gentle to the parts to be conveyed and sterilizable. Preventing black discoloration to pills. Reduce operational noise.

- Transport containers
- Dosing devices
- Packaging machines (Blister)
- Feeding trays
- Sampling equipment
- Weighing devices
- Mixers

















- Seamless coatings facilitate cleaning
- Coated NFe filling module prevents black staining
- Separation section being "rubberized" with FDA conformity
- Abrasion resistant coated agitator with non-stick characteristics
- Coated feeding hopper of a pharma packaging machine
- "Elastomeric" screwfeeder protects sensitive items
- FDA conformity even for 3D-printed plastic parts

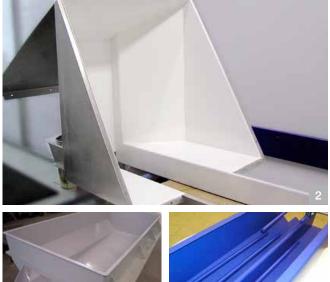
Automation Components

Reference: MetaLine® Series 500/700



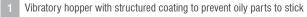
Sprayable elastomeric coatings for the protection of sensitive surfaces. For scratch protection, feeding optimization and noise reduction – reliable & proven.

- Linear feeders
- Elevators feeders
- Vibration trays
- Vibration hoppers
- End pulley conveyors
- Centrifugal feeders
- Step feeders









2 Stepped feeder with combined protective/noise reducing lining

3 Spiral elevator completely coated internally – hard to believe

4 Seamlessly internally & externally coated vibratory hopper

5 Elastomerically lined feeder for pharmaceutical components

6 Non-stick coated food conveyor with FDA conformity

7 Details of a perfect soft coating – without irregularities or sharp edges





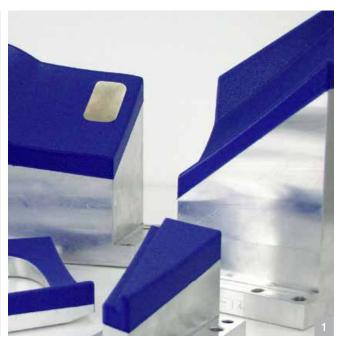
Workpiece Carriers

Reference: MetaLine® Series 500/700

Sprayable elastomeric coatings for safeguarding highly sensitive surfaces and for scratch and marking protection.

Fulfills highest protection demands during the assembly of painted, translucent or chromed automotive parts.

- Assembly supports
- Assembly nests
- Transfer systemes
- Forging dies
- Sockets / prisms
- Mounts















- 1 Velvet-like structured, rubbery protective coating perfect cushioning
- 2 Scratch-proof-coated bumper nest made of POM
- 3 Coated assembly nests for chrome-plated vehicle add-on parts
- 4 Suitable for supports made of PE, PA, wood, aluminum, rubber, 3D-Print...
- 5 Soft surfaces cannot scratch harder surfaces that's the MetaLine® secret
- 6 Coated assembly device for electrical handhold power tools
- 7 Non-scratch standard with all leading European car manufacturers

Plastic Welding

Reference: MetaLine® Series 500/700





Sprayable elastomeric coatings for the surface protection during plastic welding processes. Precise, true-to-contour, soft and haptic – but nevertheless durable & wear-resistant.

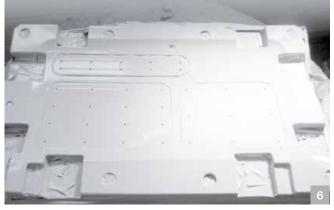
- Ultrasonic plastic welding tools
- Vibration plastic welding tools
- Friction plastic welding tools











- 1 Precisely leveled coating with a high static friction of my(0) = 0.5
- 2 Limousine dashboard tool coated with 1 mm MetaLine® 580
- 3 A typical MetaLine® application with love for every technical detail
- 4 Automotive tool coated with MetaLine® 590, green, 1 mm thickness
- 5 Coated welding tool for passenger car rear lights
- 6 Variable in hardness, static friction and surface texture
- 7 More durable than glued-on plastic or rubber sheets





Workpiece Magazines

Reference: MetaLine® Series 500/700

Complex surface geometries of toolcarriers require adaptable coating solutions in order to protect sensitive surfaces and providing scratch, mark and slip protection.

- Cleaning baskets
- Tool bins
- Assembly supports
- Display containers















- 1 Workpiece carriers coated seamlessly with a soft-elastic surface
- 2 Textured surfaces reduces the contact area and are less "scratchy"
- 3 Trolley for car parts supply to the assembly line no damages anymore
- 4 Toolset coated slip-resistantly all over
- 5 Bead blasting magazine coated for continuous re-use
- 6 Washing basket padded out on all sides elastomerically
- 7 Without disturbing edges and corners that are MetaLine® coatings

Electrical Insulation

Reference: MetaLine® Series 500/700

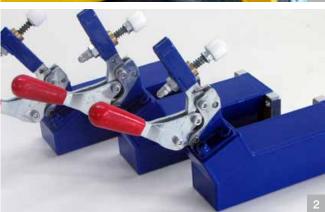




Elastomeric coatings to be applied by means of spraying for electrical and thermal insulation. Dielectric breakdown voltage approximately 5 KV per 1 mm of coating thickness.

Anti-Static versions available upon request!

- Large welding electrodes
- Sensors
- Current collectors
- Control tools
- Submersible motors
- Dip galvanizing frames











- 1 Decorative, seamless, elastomerically plus permanently insulated
- 2 Coated test device protects tester and specimen alike
- 3 The lining thickness influences the final extent of the insulating effect
- 4 MetaLine® is suitable for insulating the most complex geometries
- 5 Waterproof, easy-to-clean electrical insulating coating
- 6 Agreeable & safe grip offers protection against current flashover
- 7 For inspection services MetaLine® can be "cut opened" and resealed





Protective Covers for Assembly

Reference: MetaLine® Series 500/700

Sprayable elastomeric coatings to create tailermade protective covers for assembly purposes. Very low weight (density 1.05 g/cm³). Mechanically resistant & easy to clean.

NO mold is necessary to produce the protective cover; execution can simply be realized by use of an original vehicle body part.

Individual color codes for easy identification per car model or local assembly positioning can be easily implemented.

- Scratch protection covers
- Impact protection covers
- Door frame inserts















- 1 Protection cover against scratching filling hoses during final inspection
- 2 Self-adhesive or magnet-supported version for rim guard
- 3 Sill protection cover between A and B column (front door)
- 4 Assembly protection for the installation of the door-locking devices
- 5 Protective cover for the front fender (passenger side)
- 6 Impact protection to ease the assembly of the right front door
- 7 Protector for the center console (here for the Renault "Symbol")

Special Tools

Reference: MetaLine® Series 500/700





Sprayable elastomeric coatings for the protection of sensitive surfaces against scratches. Superior (non-allergic) haptical properties for wet or oily hands.

Different color codes to avoid danger of tool mix-ups can be integrated.

- Tool handles
- Nuts / bits
- Hood / trunk lid arrester
- Tool extensions
- Indent tools
- Gauges











- 1 Nuts sheathed on all sides elastomerically
- 2 Small tools coated for vehicle passenger compartment assembly
- 3 Thermally insulated, slip-resistant tool holder
- 4 Partially rubber-coated manufacturing tool for noise reduction
- 5 Door breaker used by fire fighters coated for firm grip
- 6 Test plug for vehicle engine compartments designed scratch-proof
- 7 MetaLine® to secure that each touch remains invisible





Cathodic Dip Painting

Reference: MetaLine Series 500/700

Sprayable elastomeric coatings as non-stick lining in cathodic dip painting (cataphoresis). Very smooth surface characteristics. Can be overcoated or repaired at any time.

In contrast to often used glass-fiber-reinforced vinylester coatings, extremely shock and impact resistant.

- Conveying satellites
- Dip basins
- Auxiliary frames















- 1 During the solvent-free spray elastomerification with MetaLine® 795
- 2 Modular 4-coat system for maximum service life
- 3 Details speaking for themselves in terms of edge coverage & smoothness
- 4 A thickness of approx. 1.5 mm provides reliable long-term protection
- 5 Easy to clean and practically free of any real maintenance
- 6 KTL dip basin walls coated with MetaLine® 795
- 7 Satellite frame seamlessly coated & insulated all-round



Drive Pulleys / Rollers

Reference: MetaLines® Series 500/700





Sprayable elastomeric compouds for the repair of existing linings or complete new roller coatings. Available hardnesses from 60 to 95 Shore A in a seamless quality.

End-faces can be covered as well.

- Drive rollers
- Vacuum rollers
- Textile rollers
- Transport rollers
- Pulleys
- Friction wheels
- Diabolo rollers
- Cable drums











- 1 In-situ elastomerification without additional machine processing
- 2 MetaLine® coatings bond to metal, aluminium, FRFP, rubber, ...
- 3 Spraying is the perfect technique for globular or diabolo geometries
- 4 Textile drive rollers coated with a static friction my(0) 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 MetaLine® on paper rollers can be machined to a precision of 1/100 mm



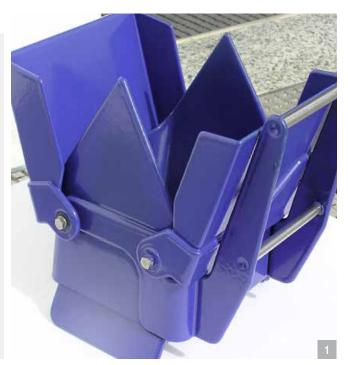


Weighing Technique

Reference: MetaLine® Series 500/700

Sprayable elastomeric coatings for the soft cushioning, protective lining of weighing elements. FDA conformity and easy to clean/sterilize. Recommended as break protection for deep-frozen food. Extremely noise-reducing.

- Multihead scales
- Scale pans
- Crane scales
- Flow scales













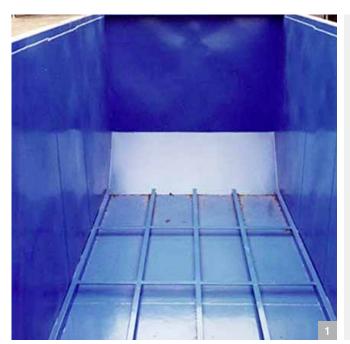


- 1 Weighing device of a multihead weigher coated with MetaLine® 580
- 2 Non-stick, non-break MetaLine® cushions sensitive goods
- 3 Funnel of a weighing station treated with MetaLine in EU 1935/2004 purity
- 4 Weighing container coated for slip enhancement
- 5 Sampling device with MetaLine® 598 non-stick textured coating
- 6 Seamlessly FDA-coated anti-slip sockets of a weighing unit
- 7 Coated pads of a forklift truck weighing attachment

Receptacles / Containers

Reference: MetaLine® Series 500/700





Sprayable elastomeric coatings for thin or thick linings of sensitive storage and transport containers. Impact-resistant, reduces noise development, protects against sticking and solves corrosion problems.

- Boxes
- Bins
- IBC containers
- Compost containers
- Shipping trays
- Chemical containers











- 1 The elastomeric skin is crack and deformation-resistant
- 2 Seamless, low-friction surfaces optimizes the cleaning
- 3 Reduces impact forces and their noise development
- 4 Protects surfaces when storing aggessive bio-waste
- 5 Maximum corrosion protection even during direct exposure to salt
- 6 MetaLine coatings adhere to many materials including FRP
- 7 Electrochemical insulation, e.g., to transport titanium rivets in steel bins





Plastics 3D Printing

Reference: MetaLine® Series 500/700

Printed plastic components show a superficial roughness which excludes their use in areas subject to food and pharmaceutical regulations. Unsuitable coefficients of surface friction and inadequate wear and impact resistance furthermore limit their usability.

MetaLine® Series 500 coatings optimize parts regarding their surface quality (porosity / resistance to wear). Compliant according to FDA 177.1680, (EU) 1935/2004.

Suitable for filaments, among others like:

- PLA (Polyactide)
- ABS (Acrylonitrile butadiene styrene)
- PVA (Polyvinyl alcohol)
- PA66 (Polyamide)
- PS (Polystyrene)



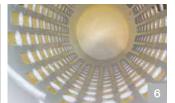










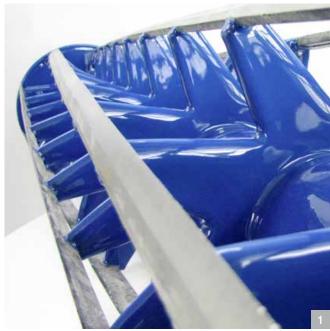


- 3D print with a friction reduced coating (coefficient of only my(0) = 0.1)
- 2 After coating free of pores, smooth and mechanically more resistant
- Expect the maximum from MetaLine® and you still will be surprised
- 4 Pharma-grade and compliant with foodstuff regulations
- 5 For complex geometries and various component sizes
- 6 Coatable in almost any color shade according to customer request
- 7 MetaLine® coatings offer reliability in itself even for heavier parts

Food / Beverages

Reference: MetaLine® Series 500/700





Sprayable elastomeric coatings to protect (frozen) food against breakage, sticking or discoloration. Easy to clean and improved non-stick properties.

Will not "chip" like paint or plastics due to its rubber-like material behavior.

- Flour mills
- Bottle grippers / tulip sleeves
- Rerouting stations
- Screw conveyors
- Food transport vehicles



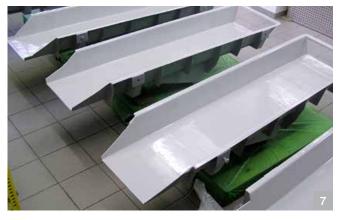








- 1 Lined cutter for pet food manufacturing in typical MetaLine® precision
- 2 Elastomerically coated washing screen drum for potatoes
- 3 Screw conveyor seamlessly "rubberized" in liquid spay form
- 4 Hopper for grain wear-protected with 4 mm MetaLine® 795
- 5 Coated sponge scrapers for cleaning milk tubing / dairy installations
- 6 Food delivery van sprayed with MetaLine® 785 to meet hygiene standards
- 7 Wear-resistant MetaLine® 598 non-stick "food-lining" for cereals





Aeronautical Engineering

Reference: MetaLine® Series 500/700

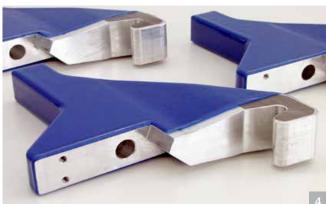
Sprayable elastomeric coatings offering soft-touch surface characteristics. Extremely resilient, wearresistant and durable.

Passable, impact-absorbing and variable in color. Applicable in any desired film thickness.

- Mounting brackets
- Maintenance equipment
- Engine testing devices
- Check-weights for wing testing
- Pneumatic tools
- Protective assembly covers (protectors)















- To avoid chafing on cable glands MetaLine's® soft surface is N° 1
- 2 For all devices contacting the aircraft cushioning takes place automatically
- 3 Assembly protection on this hull support for the legendary A350XWB
- 4 Protection always comes first with MetaLine® 785
- 5 Coated rollers for scratch-free lengthy goods handling
- 6 Lifting device impact-resistant elastomerified with MetaLine® 785
- 7 Even control or measuring devices can no longer harm surfaces

Sound Deadening

Reference: MetaLine® Series 500/700

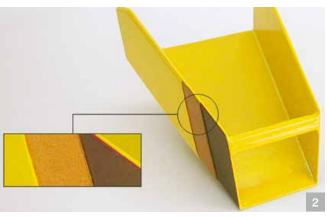




Sprayable dispersion coating (MetaLine® 440) for the external structure-borne sound deadening of thin-walled metal structures. Rest-elastic and decorative.

FDA compliant ovecoatable with MetaLine® 500/700 series.

- Transfer funnels
- Hoppers
- Feeder bowls
- Enclosures
- Thinn sheet metal coverings









- 1 External sound deadening without influencing the internal flow rate
- 2 Sealed, leakproof, dust-free, clean MetaLine® 440/795
- 3 When the part shape becomes a problem, MetaLine® helps
- 4 Sounds like plastic no resonance and no high notes
- 5 Firmly bonded to the substrate and almost invisible
- 6 Seamlessly FDA-coated and therefore quiet + pharma-compatible
- 7 Difficult geometries are the pure strength of MetaLine®





Engineering Details

Reference: MetaLine® Series 500/700

The Coating Materials

The deciding functional element of MetaLine® surfaces is their seamlessness. The coating thickness starts from 500 my and increases depending on the load. Most applications ranges between 1–2 mm - in order to build up a sufficient and permanently elastic compression memory.

- Scratch / Mark protection prevents scratches, marks or discoloration. Explicitly recommended for transparent plastics and glass parts
- **Noise inhibition** prevents noise even in the beginning instead of a complex enclosure. Structure-borne sound- absorbing properties allow a reduction of up to 20 dB (A)
- Increased performance speeds up the transport of oily, dirty or dusty parts. Damps down forces and supports smooth sliding
- Wear protection withstands extreme bumping, impacting and scratching stresses. When comparing identical layer thicknesses, the coatings are as wear-resistant as glued polyurethane sheets!

MetaLine® adheres to all metals, GRP, polyamide, epoxy, rubber and other materials. Unlike glued-on elastomer plates which often require renewal due to a loss of bonding, Meta-Line® polymerizes in the shape of the component. There is no tension-related detachment tendency from the substrate.

MetaLine® is a **particle-free system** that does not contribute to the contamination of the transported material – e.g., in contrast to conveying brushes. Cleanable with aqueous cleaning agents; sterilizable in the vaporizing process by means of alcohol (IPA). The application can be done in various shades to ensure contrast formation of camera systems.

MetaLine® coatings are considered to be **pharmaceuti- cally safe** by the US authorities under FDA 177.1680 (Title 21) and for dry substances classified as food-safe.

A special form are the **structured coating versions**. These ensure smoother transport, scratch-free delivery, minimize static charge build-up due to the **reduced surface charge** and are even mandatory for manipulating **oily** or wet parts.

Hardness (A.S.T.M. D2240-68)	60-98 Shore A
Density (DIN 53 479)	approx. 1.05 g/cm ³
Tensile strength (A.S.T.M. D412-68)	20-24 N/mm ²
Tear resistance (DIN 53 515)	55–68 N/mm
Elongation at break (A.S.T.M. D412-68)	275–650 %
Bashore resilience (DIN 53 512)	27–63 %
Thermal conductivity (DIN 52 612)	0.2 W/K m
Dielectric surface resistivity (DIN 53 482)	7 x 10 ¹⁰ ohms
Dielectric breakdown voltage (DIN 53 841)	> 5 kV / mm
Temperature resistance (dry)	-50 °C to +120 °C
Abrasion according to Taber (A.S.T.M., D1-044-73 - H-22)	approx. 8.2 mg
Abrasion (DIN 53 516)	55–85 mm³
Coefficient of static friction (DIN EN ISO 8295)	μ (0) = 0.1-0.7
Approvals International	FDA 177.1680 (21)



Cost Effectivness & Repair Options

Reference: MetaLine® Series 500/700



Great solutions for a reasonabel budget!

MetaLine® automation coatings have been used or recommended by almost all leading European suppliers for many years – a proven, trusted and **safe process**!

The application is made by experienced **specialists** in a multi-layered process at our southern German headquarters. For this purpose, high or low pressure spraying processes with up to 150 bar pressure are used. Highest attention is paid to the precise contour impression. The components are not exposed to heat. The coatings are machinable after solidification with **cutting processes**. Existing old linings are previously environmentally friendly removed.

For each workpiece, a mixing batch of up to **8 components** and additives is prepared to set the desired conveying properties. The data are determined on the basis of the conveyed material, also by means of operationinal testing in advance. MetaLine® however does NOT perform any mechanical adjustment or optimization work on the provided components!

The **self-processing** of MetaLine® automation coatings is possible in principle, but requires investments in sandblasting, coating equipment and paint booth technology as well as an intensive multi-day training and **experience** in dealing with automation components. The self-application is interesting only for the manufacturers of supply systems!

Standard coatings are carried out within 7 working days. For a surcharge, **24-hour express production** for single parts is available upon request. The coating services are charged according to effort and not dimensions.





On-site repairs and maintenance . . .

MetaLine® has developed the **Series 700 Cartridge Casting System** for local, minor spot repairs. This provides the user with a material that can be used for **partial repairs** of existing linings. Return to service is possible already after 12 hours. Surfaces to be repaired must be dry, clean, grease-free and **roughened**. The procedure conforms to FDA standards.

A complete repair kit with a caulking gun, roughening tool, cleaning agent, primer and 0.23 kg coating material is available right from the shelf to cover urgencies.

However this method is NOT suitable for coating complete components or repairing bigger or multiple damages!



MetaLine® Series 700 Cartridge Casting System
Small, fast, cost-effective – the on-site self-processing repair solution for emergencies

MetaLine .com

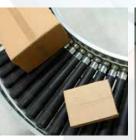
surface protection















Simply trust MetaLine's "Engineering Made in Germany"!

You will find MetaLine® products being 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 ProcessingGlass Processing
- Metal Foundries
- Mining Technology
- Municipal Technology

- Nautical
- Occupational Safety
- Offshore & Marine
- Packaging Technology
- Petrochemical
- Pharmaceuticals
- Plastics Processing
- Power Plant Technology
- Pulp & Paper
- Recycling Technology
- Surface Technology
- Textile Machinery Design
- ... and many more