Why use BONDERITE pre-treatment or functional coating solutions?

The BONDERITE M-NT and M-PP product ranges comprise innovative corrosion protection products for metal pre-treatment and coating.

Technology Features

New generation BONDERITE M-NT solutions solve your specific metal pre-treatment challenges beyond your expectations.

- Broader operation window
- Few process steps
- Short contact times
- Less maintenance

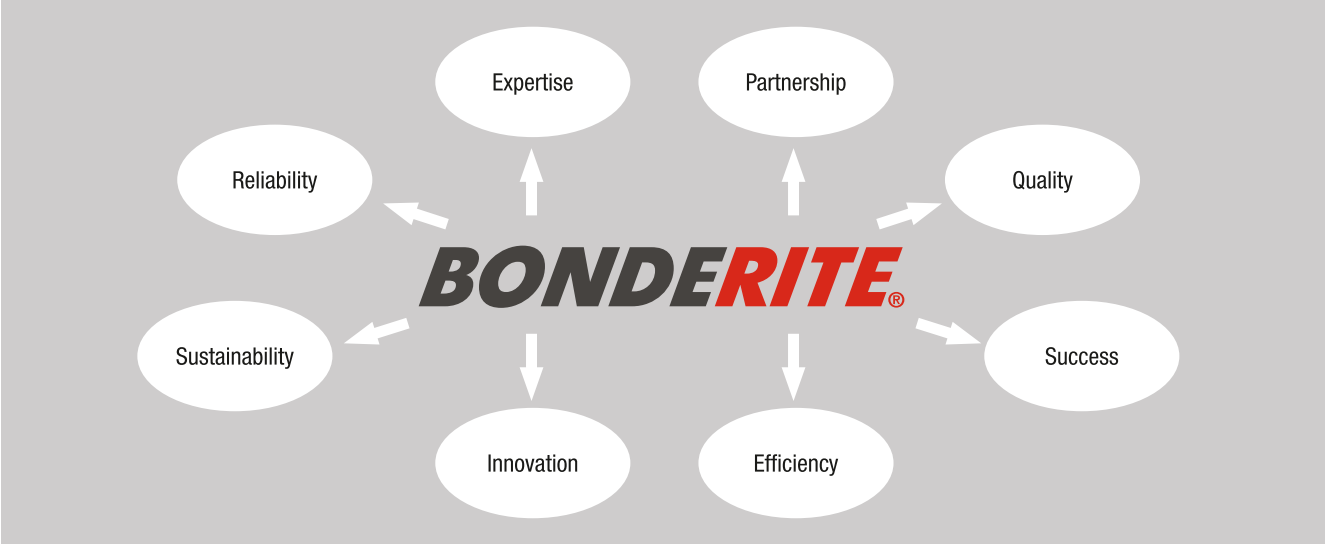
BONDERITE M-PP is the only organic coating solution able to provide outstanding steel corrosion protection on sharp metal edges and inside tubes or box sections. Unlike electrocoating and powder coating, BONDERITE M-PP has no throwing power limitations.

- Coats fully assembled parts
- Inside and outside part protection
- No electrical contacts required
- No special rack stripping required

Process Cost Reduction

By using BONDERITE, you will generate significant process cost savings derived from both low investment costs (shorter processes than conventional methods) and low running costs (reduced energy, manpower, maintenance, waste disposal and water consumption). Capitalising on recognised values such as reliability and high quality standards, our know-how will help you to optimise your individual metal pre-treatment processes. We will support you in utilising the advantages of the BONDERITE solutions and integrating them into your own production facility. These solutions are supported by advanced equipment technologies.

Advantages of using BONDERITE metal pre-treatment and functional coating solutions at a glance

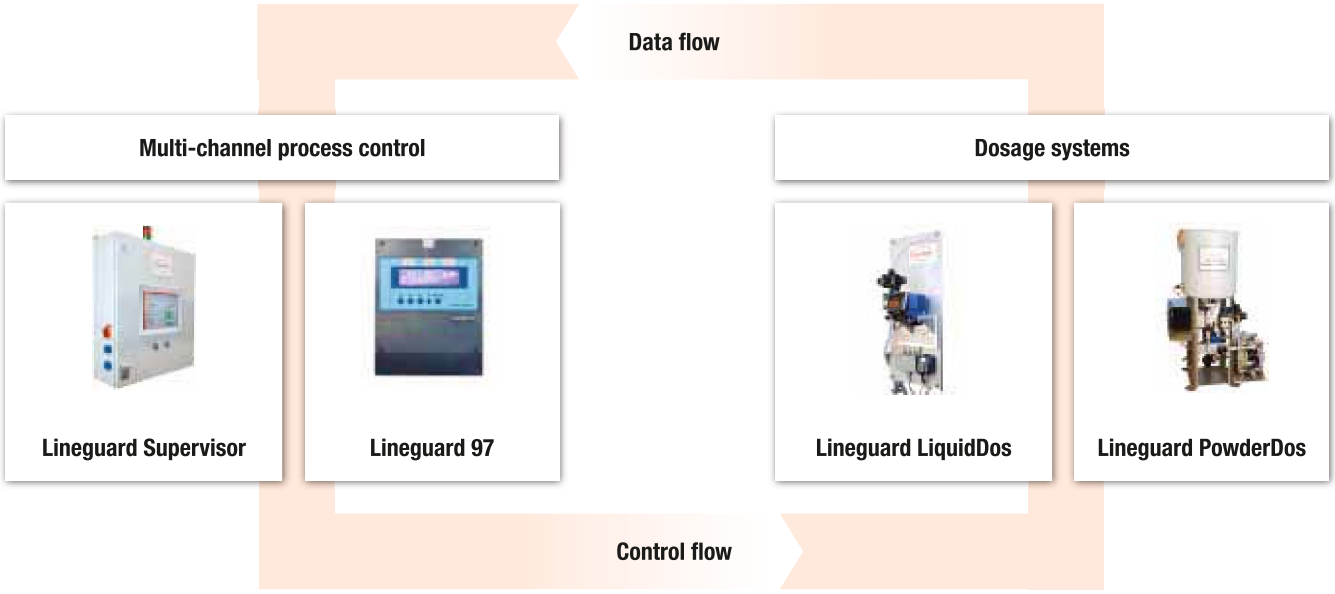


Process management systems

Henkel can provide you with a customised multi-channel process control system for exact dosing of cleaners and surface treatment products:

- Fully automated handling of different chemical measurements and dosages
- One computer to control all the data
- Transfer of all data for the documentation to an internet-based database

For more information please contact your local sales engineer.



Benefits

- External communication and control
- Deep knowledge of your process parameters
- Assurance of consistently high quality
- Detailed documentation with regard to standards and specifications

Service

Profit from Henkel's market expertise and extensive support capability, which allow you to capitalise on complete solutions that go beyond the mere supply of chemicals for the pre-treatment process. Henkel laboratories carry out all kinds of analytical services or corrosion tests to guarantee that your process always meets the highest quality standards should you need personal assistance, we are always available at the local level via our recognised international technical and sales service team.

Design

We are keen to share our extensive experience with you – whenever processes have to be re-engineered, optimised or adapted to new materials, machine equipment, specifications or legislation. Our R&D team is permanently engaged in developing cutting edge technologies to take the efficiency and profitability of our metal pre-treatment processes to the next level.

Minimum Ecological Impact

All our products are solvent free, water based and free from regulated heavy metals. Gas and electricity resources are conserved since less equipment is needed and bath and oven curing temperatures are lower. As a result, our products deliver more value at a reduced ecological footprint.

Metal Pre-Treatment and Functional Coatings
Product Table

PVDC coating

Solution

BONDERITE M-PP 866

Application	Dip
Appearance	Black
Process temperature	+20°C

All BONDERITE M-PP products mentioned exhibit significant saving opportunities in greenfield versus traditional processes, plus uniform coating thickness without Faraday cage effect.

BONDERITE M-PP 866
- Outstanding barrier properties
- Low temperature curing (+90°C)
- Flexible coating with high impact resistance
- Water based
- Top coatable with liquid paints

Corrosion protection, auto-deposition coating

Epoxy-acrylic coating

BONDERITE M-PP 930

Dip
Black
+20°C

BONDERITE M-PP 930
- Tough and chemical resistant
- Curing at 180°C
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

BONDERITE M-PP 935G

Dip
Grey
+20°C

BONDERITE M-PP 935G
- Tough and chemical resistant
- Curing at 180°C
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

BONDERITE M-PP 930C

Dip
Black
+20°C

BONDERITE M-PP 930C
- Tough and chemical resistant
- Curing at 180°C
- Designed to coat cast iron
- Energy efficient process
- Water based
- Hard coating
- Heat stability
- Top coatable with liquid or powder paint

Metal Pre-Treatment and Functional Coatings

Product Table

	Multi-metal phosphating	
	Tricationic zinc phosphate	Manganese phosphate
Solution	**BONDERITE M-ZN 952/958**	**BONDERITE M-MN 117**
		
Application	Spray/dip	Dip
Appearance	Clear liquid, green	Clear liquid, green
Concentration	–	–
Process temperature	+48°C to +55°C	+50°C to +60°C
	BONDERITE M-ZN 952/958 • Generates a fine crystalline coating as excellent foundation for subsequent paint coatings • Provides excellent adhesion and corrosion resistance properties • Robust process • Suitable for multi-metals and automatic control	**BONDERITE M-MN 117** • Black manganese phosphate layers on iron and steel • Reduces frictional resistance and shortens the running-in period of machine parts • Low temperature application • Combined with anticorrosion oils and waxes, the phosphate layers provide excellent corrosion protection • Nickel free conversion coating

For traditional processes and special applications, please contact our sales staff or our technical service people.

New generation coating

Cleaner-coater

BONDERITE M-NT 40043*

Spray/dip

Colourless with golden hues

5 – 25 g/l

+20°C to +55°C

BONDERITE M-NT 40043*
- Substitute for iron phosphating
- Good compatibility with powder and liquid paints
- Simple, robust, short process
- Free of toxic, regulated heavy metals
- Zirconium based chemical conversion for steel, galvanised steel and aluminium

Standard lines

BONDERITE M-NT 20120/2011

Spray/dip

Colourless with golden hues

–

+20°C to +40°C

BONDERITE M-NT 20120/2011
- Substitute for iron phosphating
- Free of phosphates, COD, BOD and toxic regulated heavy metals
- Extremely fast process with very little chemical sludge
- Low temperature application
- Good compatibility with powder and liquid paints
- Efficient flash-rust inhibition
- No frost sensitive material
- 2 years shelf life
- Conversion coating for steel, zinc and aluminium surfaces

High performance

BONDERITE M-NT 1200

Spray/dip

Colourless with golden hues

–

+20°C to +40°C

BONDERITE M-NT 1200
- Substitute for zinc phosphating
- Free of phosphates, COD, BOD and toxic regulated heavy metals
- Very fast process with very little chemical sludge
- Low temperature application
- Conversion treatment for steel, galvanised steel and aluminium

BONDERITE M-NT 30001/30002

Spray/dip

Colourless

–

+20°C to +40°C

BONDERITE M-NT 30001/30002
- Free of phosphates, COD, BOD and toxic heavy metals
- Low temperature application
- Good compatibility with liquid, powder and electropaints
- Conversion coating for zinc, steel and aluminium surfaces.

*Part of the cleaner-coater range

Metal Pre-Treatment and Functional Coatings
Product Table

Solution	Electro ceramic coating
	BONDERITE M-ED ECC
	
Application	Dip
Appearance	Light to dark grey
Concentration	–
Process temperature	+15°C to +50°C

BONDERITE M-ED ECC
- Exceptional protection against corrosion, extreme temperatures and abrasion
- Weight reduction – allows replacement of steel with protected aluminium, magnesium and titanium
- Low coefficient of friction

For traditional processes and special applications, please contact our sales staff or our technical service people.

Light metal finishing

Conversion coating

BONDERITE M-NT 4XXX

Spray/dip
Liquid, translucent, light yellow
5 – 10 g/l
+20°C to +35°C

BONDERITE M-NT 4XXX
- Excellent corrosion resistance and adhesion properties for subsequent paint coatings
- Low temperature application
- Rinse and no rinse process
- Ti/Zr based system
- Generates colourless conversion coating layer on aluminium and its alloys
- Aluminium substrates and multi-metal substrates in lower share

Chrome free conversion of light metals and post passivation of phosphate layers

BONDERITE M-NT 5XXX

Spray/dip
Changes from colourless to light green
30 – 250 g/l
+30°C to +50°C

BONDERITE M-NT 5XXX
- Coating and pre-treatment solution free of Cr6+
- Inorganic chemistry, COD-free
- High corrosion protection on bare metal
- Low electrical contact resistance
- Coating colour depends on alloy and application parameters
- Ecological alternative to MIL–C–5541 applications

Approval: GSB and Qualicoat

One product, two applications

Anodising

BONDERITE M-ED 11002

Spray/dip
Colourless, clear liquid
1 – 3 g/l
> +96°C

BONDERITE M-ED 11002
- Generates a slight buffering effect
- Produces an outstanding optical finish on electrolytically coloured parts
- Substantially extends sealing bath life
- Fulfils all required short-time tests
- Zr-based system
- Prevention of sealing smut during the hot water sealing of anodised aluminium

Approval: Qualanod