

BONDERITE®

New Generation Coating BONDERITE M-NT

The highest standard for corrosion
protection and paint adhesion

Henkel

Excellence is our Passion

BONDERITE® – Upgrades your standards.

Upgrade your standards. BONDERITE functional coatings.

BONDERITE solutions create competitive advantages across the industrial manufacturing marketplace. Its processes deliver superior cost-in-use and operational efficiency through a broad portfolio of cleaners, surface treatment and coating products.

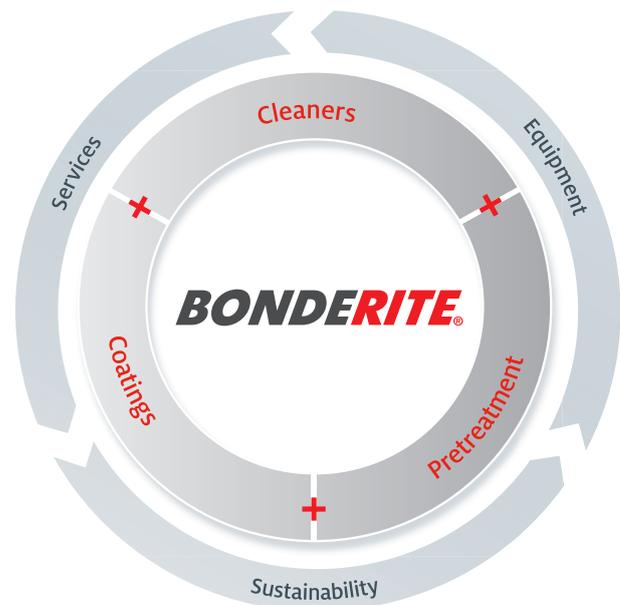
Performance redefined – BONDERITE coatings

BONDERITE coating processes offer a strong combination of innovative products that bring reliability and sustainability. Your manufacturing operations benefit from the simplified coating process and improved corrosion resistance features. This leads to higher value, while meeting the stringent environmental requirements of today and setting the standards of tomorrow.

Pretreatment processes of the next generation: BONDERITE M-NT

Henkel has once again set new standards. Thin film conversion coatings offer new opportunities with a reliable, state-of-the-art pretreatment process. BONDERITE M-NT conversion coating delivers the sustainability and process savings you expect.

Spray and dip applicable BONDERITE M-NT reduces the complexity throughout the entire pretreatment process and offers new flexibility to your production. This means saving potentials with superior quality and performance.

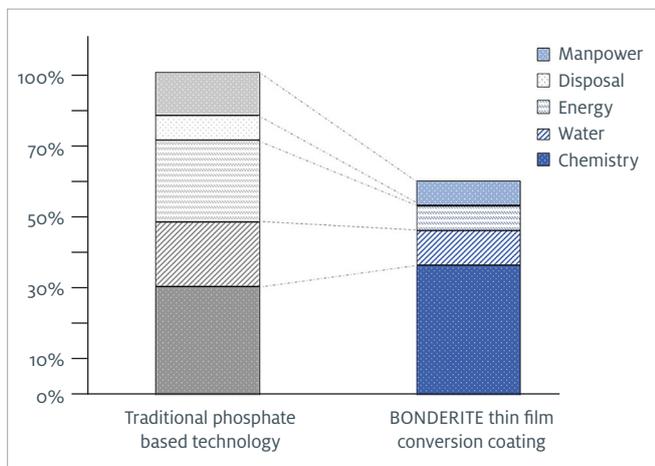


Key benefits

Henkel continues to pursue its success as global leader in surface treatment. The new generation coating is an exceptional component to drive process flexibility and efficiency:

- Reduces process complexity and process costs (energy costs, transportation, storage, disposal)
- Increases your products' quality
- Improves Health & Safety and eco-friendliness
- Highly robust corrosion protection layer
- Application at room temperature
- Efficient flash rust inhibitors
- Excellent paint adhesion
- Accelerated surface preparation
- Extended shelf life up to 3 years
- No frost sensitive material

Process value creation

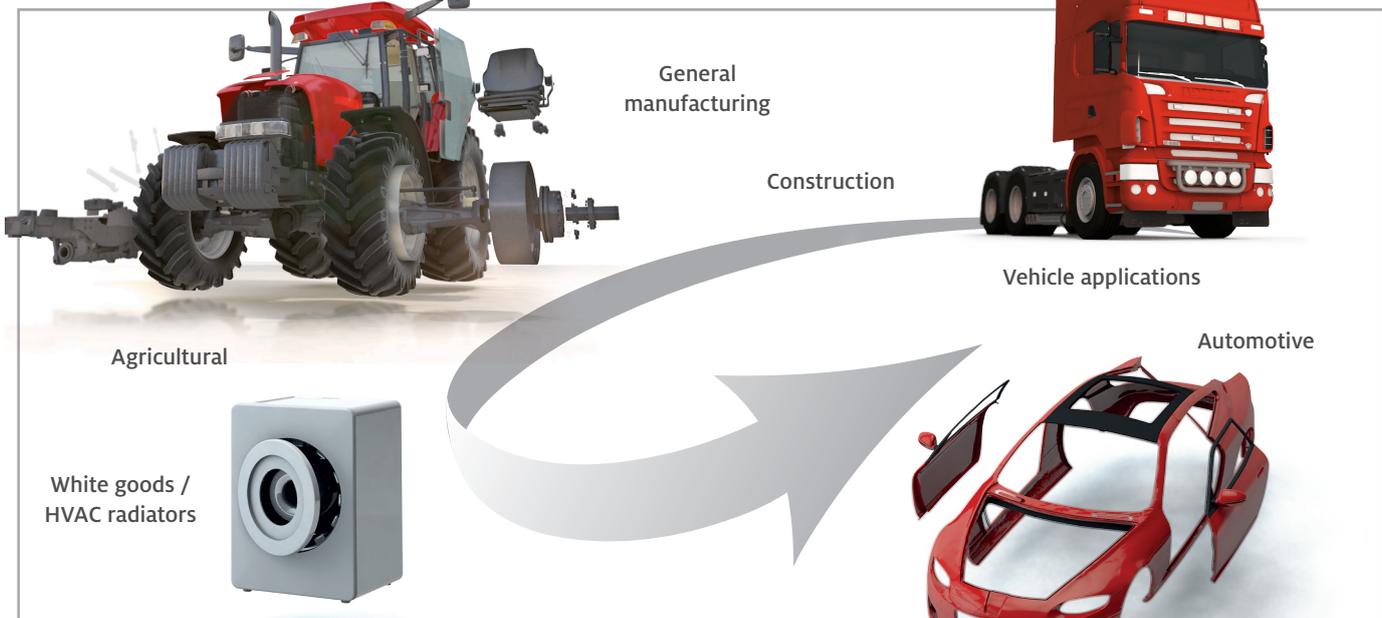


BONDERITE thin film conversion coating allows savings from 20% to 40%

Developed for steel, zinc and aluminum surfaces. BONDERITE M-NT – applications and product range.

Henkel provides its customers technical, manufacturing and business development support for this unique technology in every region of the world. Some typical commercial applications are shown below.

Parts and Industries



The BONDERITE M-NT process generates clear benefits, when applied on large elements like chassis, cabins and frames in different areas.

Product range BONDERITE M-NT

	Cleaner-coater	Standard lines	High performance	
	BONDERITE M-NT 40000 series	BONDERITE M-NT 20000 series	BONDERITE M-NT 10000 series	BONDERITE M-NT 30000 series
Process steps	3 to 4	5 to 7	5 to 7	5 to 7
Application	Spray/dip	Spray/dip	Spray/dip	Spray/dip
Appearance	Colourless with golden hues	Colourless with golden hues	Colourless with golden hues	Colourless
Concentration	5 – 25 g/l	–	–	–
Temperature	+20 to +55 °C	+20 to +40 °C	+20 to +40 °C	+20 to +40 °C

Suitable for dip and spray applications. The BONDERITE M-NT process.

BONDERITE M-NT is the fast, easy, green and efficient alternative to phosphate conversion coatings: It is an innovative product family of multi-metal pretreatments which leads to superior corrosion resistance and paint adhesion.

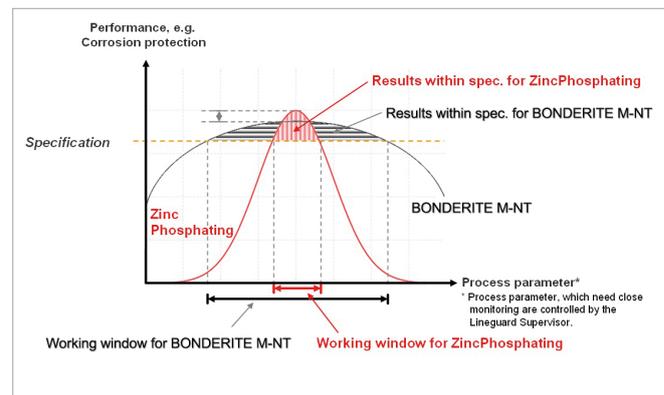
Reduced complexity, lower costs

The Bonderite M-NT product family establishes an extremely robust zirconium based thin film conversion coating on the substrate which offers unequalled corrosion protection within the pretreatment process. Improved formulations with highly effective flash-rust inhibitors prevents steel from rusting instantly between the process stages (e.g. between conversion bath and rinse bath) or at line stops.

The nano-layer structure of BONDERITE M-NT provides enhanced paint adhesion which allows best coating results even on lower quality substrates.

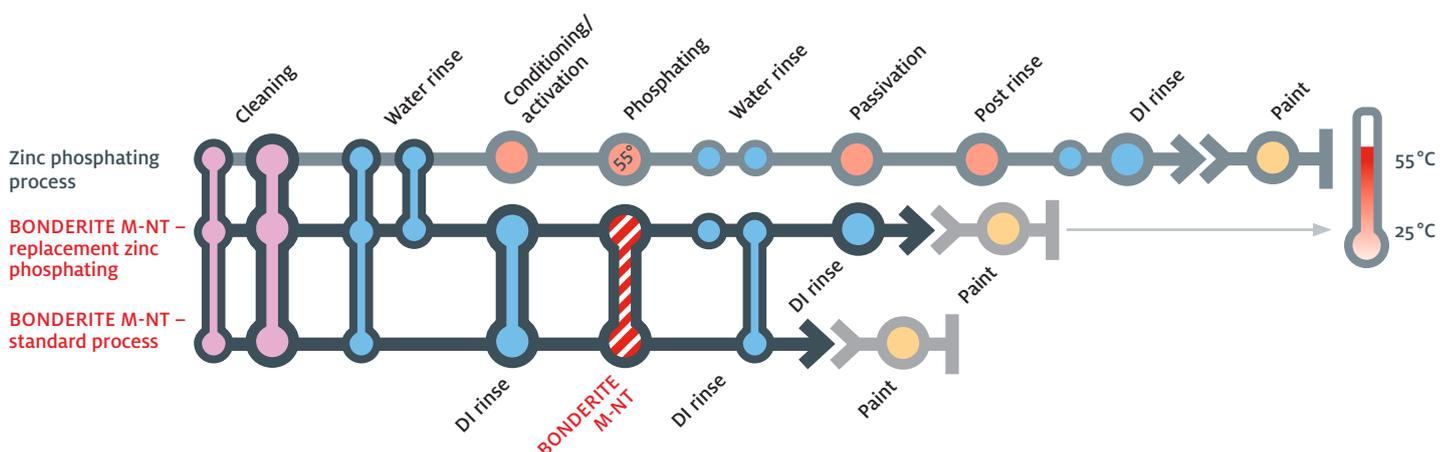
A nano process with thin coatings

BONDERITE M-NT forms a cohesive, inorganic, high-density coating. This protective layer is significantly thinner than zinc phosphate coating, generally less than 100 nm in thickness.



Robust process: The operation window of BONDERITE M-NT is generally broader while still delivering superior quality.

BONDERITE M-NT process versus traditional phosphating process



Committed to leadership. Sustainability with BONDERITE.

Henkel uses its in-depth knowledge of the industry as well as a broad portfolio of technologies to optimise production processes along the entire value chain accomplishing a reduction of CO₂ emissions, waste, water and energy consumption. Thus, Henkel's focus is set on its customers and their sustainability goals.

Sustainability is integrated into every step of product development so that customers anywhere in the world can use solutions tailored to their needs to increase their added value without having to worry about their environmental footprint. Henkel ensures this by keeping to its standard of the six focal areas within the sustainability strategy (see chart below).

Continuous optimisation of products and technologies provide leading performance with best-in-class features for environmental and consumer protection as well as health and safety.

Sustainability – on the safe side with BONDERITE M-NT

BONDERITE M-NT does not contain any toxic or regulated heavy metals. Unlike the traditional conversion coating method it contains no or very little phosphates. This makes it the most suitable conversion coating technology for man and environment. In addition to a maximum of safety & health for employees and workers, the use of BONDERITE M-NT creates significantly less waste, no phosphate sludge and consumes far less energy. The technology can be compatible with low temperature equipments.

Sustainability focal areas and targets, regarding M-NT processes



Life cycle reliability. Henkel process services.

Besides being a supplier of superior functional coating technologies, Henkel is in the business of solving customers' problems and improving their production operation. From design and consultancy, product development and dispensing equipment to process control, Henkel has a solution for every process cycle. Available worldwide. Together with customers and partners, Henkel develops products that assure reliable and optimum compatibility.



Selection service

BONDERITE offers an extensive portfolio of premium surface technologies and process solutions in general industries. Experienced specialists with significant knowledge consult and support customers matching individual requirements. Detailed information and training help to find the best solution.

Analytical services

Henkel can analyse the complete production process for customers. In this step, Henkel reviews all parameters required to create detailed documentation such as test data, material input, process improvements. The evaluation decreases failure rates. The result is a custom-made solution with reduced production cycle times and rejection rates by applying the appropriate Henkel products.

Lab testing

Henkel is able to test applications of your process in its own labs. Individual process steps are perfectly matched to each other and can be smoothly integrated into your plant.



Process optimisation

Henkel helps customers to design more simple and more efficient production processes. Products are adapted to fit customers' individual requirements. The solutions are designed to all environmental safety criteria as well as meeting sustainability regulations. Henkel supports you in gaining advantages by continuous process optimisation.



Customer training

Henkel customers benefit from the enormous know-how of the world market leader for functional coating. In training sessions, customers learn about products in detail and how to apply them correctly. "What if" training sessions help to solve problems with customised training manuals.

Integrated process control. Equipment.

Henkel's equipment for functional coating products incorporates over 40 years of experience in design, dosing, measurement and control systems. It rounds off Henkel's complete programme, increasing your overall process reliability.

BONDERITE equipment package

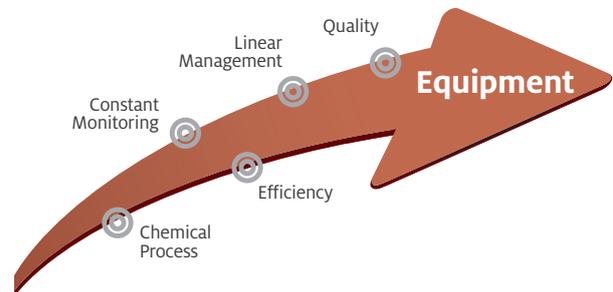
BONDERITE equipment is designed to control the metal pretreatment process for BONDERITE products. They support all bath management parameters. The baths can be analysed precisely, adjusted efficiently or even automatically by using BONDERITE equipment. Remote access and monitoring is possible. The BONDERITE equipment package is composed of three elements: basic, modular and customised lines to meet the customer requirements.

Benefits

- Linear and constant bath management
- Improved coating quality
- Increased safety
 - Process cost reduction
 - Documented and recorded process parameters
- Monitoring of process costs and chemicals



A reliable process with Henkel equipment.



LOCTITE®
BONDERITE®
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