BONDERITE

Technical Data Sheet

BONDERITE M-NT 50001

May 2017

PRODUCT DESCRIPTION

BONDERITE M-NT 50001 provides the following product characteristics:

Technology	Surface Treatment
Product Type	Chemical Conversion Coating
Application	APNR Process

BONDERITE M-NT 50001 is the product required for the nanotech process named APNR (Adhesion Promoter No Rinse).
This is used for the chemical conversion coating of metal surfaces (mainly Steel, galvanized steel and aluminum alloys) before painting.
APNR technology is applied in sequence, after the main degreasing processes (AK-C, C-NE) or degreasing with contemporary chemical conversion (M-FE, M-NT cleaner coater) and allows the use of thin film conversion coatings in plants with less than 5 stages.
The product creates a compact layer based on oxides of zirconium, which is much thinner than an iron phosphate coating. The protection obtained is of higher quality and with lower operating costs.
BONDERITE M-NT 50001 is compatible with any paint system (liquid, powder, e-coat).

DIRECTIONS FOR USE

Preliminary Statement:
Prior to use it is necessary to read the **Material Safety Data Sheet** for information about precautionary measures and safety recommendations. Also, for chemical products exempt from compulsory labeling, the relevant precautions should always be observed. Please also refer to the local safety instructions and contact Henkel for analytical support.

Application:
BONDERITE M-NT 50001 is used as a solution in demineralized water, with APNR technique.

The following operating parameters are suggested:

Technique:	immersion
Concentration:	0.2 to 1%
Temperature:	room temperature
Time:	5 to 60 sec.

The specific application parameters will be determined on a case by case basis by HENKEL Technical Support based on the specific operating conditions.

Bath Make-up:
The APNR system does not require any bath preparation as the product is fed directly to the spray ring by a controlled dilution panel which ensures the application of a fresh solution at the right concentration.

If you were to opt for the advance preparation of the solution, use 2 to 10 kg BONDERITE M-NT 50001 per 1,000 L bath: Mix briefly before any control.

Control:
The APNR system does require traditional control of the bath as the solution is not recovered after application. The solution is kept under control by continuous on-line conductivity meter that will indicate the absence of the product.

The main parameters for control of the BONDERITE M-NT 50001 solution are:

pH:	3.5 to 4.8
Conductivity:	30 to 160 µS

Replenishing:
The APNR system provides a continuous supply of BONDERITE M-NT 50001 which is added by the controlled dilution panel provided as part of the equipment APNR.

Particular Advices:
Tanks, pipes, pumps and other part of the plant must be made in stainless steel or in appropriate polymeric material resistant to acids (PVC).
The small volume of solution dripping from the parts, in case of APNR application, is not reused but, when possible, returned to one of the rinses following the degreasing stage. If recovery and return is not possible, the liquid is discharged to the waste water plant.
The application system of APNR technology generates, thanks to suitable spray systems, a nebulized cloud containing water and specific chemical product.
This cloud of mist, depending on the location of the installation within the processing tunnel, the existing ventilation systems and / or suction and the air currents present, may escape from the tunnel.
The installer and the customer have to make sure that environmental conditions are suitable and in accordance with the needs of the application.
Where necessary, appropriate extraction systems should be installed or existing systems upgraded.
Compliance with the rules relating to the health and safety of workers related to the application are also the sole responsibility of the customer.
Slight differences in the product appearance do not affect its efficiency and performances.

Storage:

Recommended Storage Temperature, °C	4 to 40
Shelf life, months (in unopened original packaging)	24

Sample

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Classification:
Please refer to the corresponding **Material Safety Data Sheets** for details on:

- **Hazards identification**
- **Transport information**
- **Regulatory information**

ADDITIONAL INFORMATION

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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