

BONDERITE M-NT 41040

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PRODUCT DESCRIPTION

BONDERITE M-NT 41040 provides the following product characteristics:

Technology	Surface treatment
Application	Spray Process
Concentration in spray processes	5 to 10 g/L

BONDERITE M-NT 41040 is a liquid innovative room temperature product set up for treatment of ferrous material, aluminum, zinc and alloys.

BONDERITE M-NT 41040 creates a very adhering zirconium based conversion layer which is an excellent anchorage base for liquid, powdered or electrophoretic paints.

BONDERITE M-NT 41040 is a phosphate free valid alternative to standard phosphor-degreasing treatment as it improves protective performances against corrosion of painted material.

Correct use of the product requires a subsequent rinse at partial renewal and if possible a final rinse with demineralised water.

BONDERITE M-NT 41040 is used on spray systems as pre painting treatment on pieces destined to, appliances, metal furniture and plate articles in general quite exposed to corrosive agents attack (moisture, atmospheric agents, etc).

BONDERITE M-NT 41040 can be combined to an appropriate cleaning booster BONDERITE C-AD 10004.

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.

Process Components:

BONDERITE M-NT 41040
BONDERITE M-AD 700

Bath Make-up:

- Fill ¾ of the bath with water (DI water recommended).
- For each 1,000 L of bath volume add to the agitated bath 5 to 10 L of BONDERITE M-NT 41040.
- If requirement to boost the cleaning effect add for each 1,000 L of bath 0.5 to 1 L of BONDERITE C-AD 10004.
- Fill the bath to normal working level and slowly add BONDERITE M-AD 700 to adjust the pH to 4.8 to 5.2.

Operating Parameters:

pH-value	4.5 to 5.7 (best 4.8 to 5.2)
Total Acid	2.9 to 5.8
Treatment time	1 to 3 min
Temperature	ambient to 35°C
Spray pressure	1 to 2 bar (spray)

Application:

Within the preferred pH range of 4.8 to 5.2 the concentration of BONDERITE M-NT 41040 must be adapted to the process.

The recommended concentration (total acid points) for every production line will depends on process time, geometry of the treated parts and other parameters.

If the concentration drops below the desired value it must be increased by adding process component BONDERITE M-NT 41040, even when the pH is already within the preferred range.

If the concentration of BONDERITE M-NT 41040 lies within the recommended working range, the pH-value of the bath must be adjusted within the recommended range with BONDERITE M-NT 41040 (decrease the pH-value) or BONDERITE M-AD 700 (increase the pH-value).

Additionally, changes in the above-mentioned process parameters may be necessary – they have to be evaluated individually and documented specifically for each production line.

Process Description:

3-4 zones (1 or 2 cleaning/coating zones):

1. Cleaning/Coating (BONDERITE M-NT 41040)
2. Rinse (industrial water)
3. D.I. water rinse
4. Drying (optional, depending on the paint system)

Bath Control:

The BONDERITE M-NT 41040 bath is controlled by determination of the pH-value and total acidity.

pH determination:

The pH is determined using a fluoride stable pH-meter standardized at pH 4 and pH 7.

pH-range: 4.8 to 5.2

pH adjustment:

To reduce pH-value add BONDERITE M-NT 41040.

To increase pH-value add BONDERITE M-AD 700.

Total Acid:

- Add 100 mL sample into a beaker 250 mL.
- Add 4 to 5 drops of Phenolphthalein Indicator.
- Fill the burette with 0.1 N Sodium Hydroxide.
- Titrate with 0.1 N NaOH to a permanent pink color.
- The mL of 0.1 N Sodium Hydroxide required gives Total Acid value.
- For a 10 g/L bath, the Total Acid, after pH adjustment, is 5.8 mL (points).
- For each missing point has to be added 1.7 kg of BONDERITE M-NT 41040 per 1,000 L of bath solution.

Recommendations:

Containers for the BONDERITE M-NT 41040 product concentrate should be made of fluoride resistant plastic like hard PVC or PP.

The bath containers for the BONDERITE M-NT 41040 bath can be made of hard PVC (free of softening agents) or stainless steel 1.4301 (AISI 304).

Alternatively, a mild steel container, lined with a fluoride resistant plastic can be used.

The spraying systems, pumps and heating facilities should be made of stainless steel (AISI 304).

The wastewater treatment and disposal must comply with the local discharge regulation.

Storage:

Temperature, °C	0 to 40
Shelf-life, months (in unopened original packaging)	36

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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Reference 0.2