BONDERITE

Technical Data Sheet

BONDERITE M-PT 54 NC

Known as Deoxylyte 54 NC
May 2021

PRODUCT DESCRIPTION

BONDERITE M-PT 54 NC provides the following product characteristics:

Technology	Metal Pre-Treatment
Product Type	Passivating agent
Application	Immersion or Spray
Process components:	BONDERITE M-PT 54 NC BONDERITE M-AD 80L

BONDERITE M-PT 54 NC is an acidic, chrome-free liquid chemical used as post-passivation in either immersion or spray final rinse to minimize underfilm corrosion and improve paint adhesion.
Depending on the previous process steps, the make-up and controlling of the bath could vary.
Please contact Henkel for specific line parameters.

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.

Bath Make-up:
For each 1,000 L of bath, add to the water (preferable DI-water) with stirring:

BONDERITE M-PT 54 NC:
2.5 to 3.75 L = 2.7 to 4.0 kg

BONDERITE M-AD 580 or BONDERITE M-AD 80L:
~0.65 to 0.9 L = 0.7 to 0.95 kg

BONDERITE M-AD 580 or BONDERITE M-AD 80L shall be added stepwise to the bath till the right pH-value is reached.

Operating Data:
Control points for normal operating conditions:

Total Acid Titration, mL	4.0 to 8.0
pH-Value	4.0 to 4.5
Temperature:	20 to 55
Contact time, sec	15 to 90
Nozzle Pressure, bar	0.8 to 1.2

Process Description:

- Pretreatment
- Rinse
- Passivation with BONDERITE M-PT 54 NC
- Rinse, DI water
- Drying

Pretreatment:

For the pretreatment the steps cleaning, rinsing, conditioning and phosphating are used. For details, please refer to the corresponding Technical Process Bulletins of the BONDERITE products.

Rinse:

A continuous overflow should be maintained to avoid contamination of the rinsing bath.

Passivation with BONDERITE M-PT 54 NC:

For the bath make-up DI-water is necessary. It is important to work in the specified pH-range. If the pH is too high, it is possible to get precipitation. If the pH is too low, it is possible to get an etch of the phosphate layer.

Rinse with Deionized Water:

Prior to electrocoat application rinsing with deionized water is recommended.

Drying:

We recommend fast and complete drying at temperatures of 80 to 120 °C in ovens with indirect heating.
In agreement with the paint supplier oven drying may be omitted prior to the application of water based paints.

Bath Monitoring:
The BONDERITE M-PT 54 NC final rinse bath is manually controlled in the plant by a Total Acid titration plus a pH-control and can be monitored and replenished by automatic control and dosing equipment.

Titration of total acid:

- Place 100 mL of bath sample into a 300 mL Erlenmeyer-flask.
- Add 6 to 10 drops of Phenolphthalein indicator.
- Fill the automatic burette to the zero-mark with 0.1 N Sodium Hydroxide solution.
- While stirring the sample, slowly run in the 0.1 N Sodium Hydroxide solution until a pink color is obtained and remains pink for 30 seconds.
- Record the number of milliliters of Sodium Hydroxide

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solution used as the Total Acid Titration.

Specified range, mL: 4.0 to 6.0

pH-Determination:

The pH of the bath can be determined by immersing a strip of pH-paper into the bath and comparing the color formed to the color standards on the dispenser or by using a pH-meter.

The BONDERITE M-PT 54 NC final rinse bath should be maintained at a pH of between 4.0 to 4.5.

The pH may be raised by making small additions of BONDERITE M-AD 80L or BONDERITE M-AD 580.

To increase the pH 0.1 units, add 0.013 kg = 0.012 L of BONDERITE M-AD 80L / BONDERITE M-AD 580 per 1,000 L of bath.

Replenishing:

To increase the total acid 1.0 mL, add 0.4 L = 0.43 kg of BONDERITE M-PT 54 NC per 1,000 L of bath.

After addition control of the pH-value is necessary.

Classification:

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

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

Storage:

Recommended Storage Temperature, °C	0 to 50*
Shelf life, months (in unopened original packaging)	36

* BONDERITE M-PT 54 NC will freeze at -3 °C. Freezing is not detrimental to the product. Should it freeze, simply thaw it in a warm place and stir prior to use. It is recommended that the product be stored in cool, dry place.

ADDITIONAL INFORMATION

Disclaimer

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. Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

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Reference 0.3

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