

BONDERITE M-PT 41

Known as Deoxylyte 41
February 2016

PRODUCT DESCRIPTION

BONDERITE M-PT 41 provides the following product characteristics:

Technology	Coil Coating
Product Type	Metal pre-treatment
Application	Spray/squeegee, coater, dip

BONDERITE M-PT 41 is a liquid, chromic acid containing final rinse for phosphated surfaces of iron, steel, zinc and aluminium.

Paint adhesion and corrosion resistance are markedly improved through rinsing with BONDERITE M-PT 41.

Passivating with BONDERITE M-PT 41 gives temporary corrosion protection to sensitive surfaces after cleaning or etching.

BONDERITE M-PT 41 can be applied in dip or spray processes.

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 with stirring/circulating pump:

BONDERITE M-PT 41 1.0 l = 1.4 kg

We recommend to take deionized water for the make up.

Operating Data:

Chromium (VI)-pointage	5.0 to 7.0
pH-Value	4.0 to 5.0
Temperature, °C	20 to 45
Time, sec	30 to 120
Spray pressure, bar	0.5 to 1.0

Process Description:

1. Pretreatment, e.g. phosphating
2. Rinse
3. Passivation with BONDERITE M-PT 41
4. Rinsing with deionised water
5. Drying

Pretreatment:

For details about our pretreatment products, please read the Technical Data Sheet.

Rinse:

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

Passivation with BONDERITE M-PT 41:

Please keep the specified range of the process parameters.

Too high chromium (VI) content can attack phosphate coatings as well as too low pH.

Too low chromium (VI) pointage or too high pH will reduce corrosion protection and paint adhesion.

Too high temperatures of the bath as well as carry-in of water hardness or salts from rinsing bathes can lead to flocculation.

We recommend deionized water for filling up the bath. A dosing pump is best suited for the additions of BONDERITE M-PT 41.

Rinse with Deionized Water:

To prevent carry-over of BONDERITE M-PT 41 or formation of salt residues a final rinse with deionized water is the last stage.

Drying:

We recommend fast and complete drying at temperatures of 100 to 150 °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 41 bath is controlled by titration of the chromium(VI)-pointage (concentration) and the pH-value.

Titration of the Chromium (IV) - Pointage:

- Pipette a 50 mL bath sample into a jodimetric flask and dilute to ~100 mL with distilled or deionized water.
- Add 1 to 2 g of Amidosulfonic Acid.
- Add ~20 mL of Sulfuric Acid (25 %) and 2 to 3 g Potassium Jodide and agitate until all is dissolved.
- Let the sample sit for approx. one minute.
- Fill the burette to the zero mark with 0.1 N Sodium Thiosulfate and titrate until a straw to yellow colour is obtained.
- Add 1 to 2 milliliters of Soluble Starch Solution to the sample and continue titration with 0.1 N Sodium Thiosulfate until the blue-black colour disappears.
- The consumption in mL corresponds to the Chromium (VI) pointage.

Specified range, points 5 to 7

Replenishing:

Add per missing point and 1,000 L bath volume:

BONDERITE M-PT 41 0.17 L = 0.24 kg

pH-Determination:

The pH is measured at 20 °C with a calibrated pH-meter.

Specified range pH 4.0 to 5.0

In a fresh BONDERITE M-PT 41-bath make-up in DI-water, the pH can be below 4.0.

To increase the pH e.g. from 3.5 to 4.0, add to each 1,000 L bath:

BONDERITE M-AD 565 0.2 kg = 0.18 L

If the pH is above 5.0 at correct Chromium (VI) pointage, the bath has to be dumped and renewed at least partly.

General Remarks:

As material for containers and spraying systems we recommend stainless steel, e.g. material no 1.4301. For heating equipment material no. 1.4408 or 1.4571 are suited.

Bath Analysis:

Pipette 50 ml (2)
Erlenmeyer flask 300 ml (2)
calibrated cylinder
Burette 25 ml (2)
distilled water
Amidosulfonic Acid
Sulfuric Acid (25%) p.a.
Potassium Iodide
1 % solution of starch (stabilized)
0.1 N solution of Sodium Thiosulfate
pH-meter

Two pieces of the glass equipment is recommended because of the risk of cracking.

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 40
Shelf life, months 36
(in unopened original packaging)

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 **N/A**