

BONDERITE M-FE 3803

Known as Duridine 3803 IT
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PRODUCT DESCRIPTION

BONDERITE M-FE 3803 provides the following product characteristics:

Technology	Cleaner - coater
Product Type	Acid 1-component
Application	Spray

BONDERITE M-FE 3803 is a one-pack liquid double action chemical process for simultaneously cleaning and iron phosphating of ferrous material.

BONDERITE M-FE 3803 forms on the treated surface an amorphous phosphatic coating, mainly composed by iron phosphates, which provides good adhesion for liquid, powder or electrophoretic paints.

We suggest a subsequent partial continuous renewal rinse and possibly a final rinse with demineralized water. A suitable final passivation improves results.

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-FE 3803 is used for pre-painting treatment of spare parts in automotive, appliances, metal furniture industries and, in general, on all plate pieces which are not much exposed to corrosive agent aggression (humidity, atmospheric conditions, etc).

BONDERITE M-FE 3803 is used in two or more stages spray treatments with the following indicative working parameters:

Concentration	10 to 20 g/L (kg/1,000 L)
Total Acid	5.5 to 11 pts
pH	4 to 5.5
Temperature	40 to 60°C
Treatment time	2 to 3 min
Spray pressure	1 to 2 Bar

Bath make-up:

- Fill the tank with tap water to 3/4 of the operating volume.
- Start the recirculating pumps and heat up to working temperature min 40°C.

- Add 10 to 20 kg of BONDERITE M-FE 3803 for each 1,000 L of bath volume.
- Fill up the tank to the final level, heat to operating temperature and let recirculate for 15 to 20 min.
- Make the controls.

Bath Monitoring:

Total Acid

- Pipette 20 mL of working bath into a 250 mL flask.
- Add ~10 mL of distilled water and 3 to 5 drops of Phenolphthalein Indicator.
- Titrate with 0.1 N Sodium Hydroxide (NaOH) until the color turns to stable pink for at least 20 min.
- The mL of 0.1 N NaOH used for the titration is the Total Acid value.
- A standard BONDERITE M-FE 3803 bath made up at 10 g/L concentration has a T.A. value of 5.5 pts.

pH determination

- Transfer 100 mL bath in a 250 mL beaker and cool it to 20 °C.
- Measure the pH value preferably with a pHmeter previously set at pH 4 and 7 (use of ion fluoride resistant electrode is recommended).
- If correction are needed act as follows:
 - use BONDERITE M-FE 3803 to lower the pH;
 - use Sodium Carbonate or Caustic Soda to increase pH value.

Replenishment:

The bath is replenished with BONDERITE M-FE 3803 according to the Total Acid value.

To increase Total Acid by 1 point, add ~1.8 kg BONDERITE M-FE 3803 for each 1,000 L of bath.

During bath ageing, a physiological increase in pH and/or T.A. values may occur.

If so, bath replenishment will be managed for keeping pH value within the operating range until bath renewal.

Caution:

In case of oil accumulation on the bath surface, partial overflow is advisable in order to avoid contamination on the treated material.

Tanks and other parts of the plant should be made of stainless steel even if the product is compatible with soft steel.

The pumps to be installed in single areas have to grant a spray pressure not lower than 1.5 atm in all active phases, except for final passivation, where the required spray pressure can be <0.8 to 1.

Higher pressure values may increase the degreasing action.

A prolonged exposure to light and heat may cause color change.

Classification:

Please refer to the corresponding **Material Safety Data**

Sheets for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Recommended Storage Temperature, °C	4 to 35
Shelf-life, months (in unopened original packaging)	36

Store BONDERITE M-FE 3803 in original packages in a ventilated place away from light exposure.

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. 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 0.2