

**BONDERITE M-FE LF-3851**Known as Duridine LF 3851 IT  
August 2020**PRODUCT DESCRIPTION**

BONDERITE M-FE LF-3851 provides the following product characteristics:

<b>Technology</b>	Cleaner - coater
<b>Product Type</b>	Acid 1-component
<b>Application</b>	
Concentration	5 to 10 g/L
Temperature	25 to 70°C

BONDERITE M-FE LF-3851 is a powder double action chemical process for simultaneously cleaning and iron phosphating ferrous material.

BONDERITE M-FE LF-3851 forms on the treated surface an amorphous phosphatic coating, mainly composed by iron phosphates, which provides good adhesion for liquid, powder or electrophoretic paints.

Subsequent partial continuous renewal rinse and possibly a final rinse with demineralized water is suggested. A suitable final passivation improves results.

BONDERITE M-FE LF-3851 is used where particular foam problems are remarked in process bath and/or rinses.

**Application Areas:**

BONDERITE M-FE LF-3851 is used in spray- and spray/immersion processes. It must be combined with a suitable cleaning booster.

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.).

**Composition:**

- Acid phosphates
- Phosphating accelerants
- Nonionic surfactants

**TECHNICAL DATA**

Appearance                    white powder  
Slight differences in colour may appear due to the used raw material. The performance, however will not be affected.

Density at 20°C  
(DIN 51757)                    ~680 g/L

pH-value (100%)              ~3.5

**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.

**Operation:**

BONDERITE M-FE LF-3851 is used in two or more stages spray treatments with the following indicative working parameters:

Concentration	5 to 10 g/L
Total Acid	4 to 8
pH-value	4 to 5.5
Temperature, °C	25 to 70 °C
Treatment time	1 to 3 min
Spray pressure	1 to 2 atm.

**Bath make-up:**

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

Add 5 to 10 kg BONDERITE M-FE LF-3851 previously dissolved in water, for each 1000 lt bath volume.

Fill up the tank to the final level, heat to operating temperature and let recirculate for 15-20'.

Make the controls

**Bath Monitoring:**Titration of Total Acid:

The BONDERITE M-FE LF-3851 bath solution is controlled by the following analysis.

- Pipette 10 mL of working bath into a 250 mL flask.
- Add about 10 mL DI water and some drops of Phenolphthalein Indicator.
- Titrate with 0.1 N sodium hydroxide (NaOH) until the colour turns to stable pink for at least 20 sec.
- The mL of 0.1 N NaOH used for the titration is the Total Acid value (V).

A standard BONDERITE M-FE LF-3851 bath made up at 10 g/L has a TA value = 8 pts.

**Titration of pH-value:**

- 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 hard water and bath ageing may cause an increase in bath pH and additions of a suitable additive may be necessary as recommended by Henkel Technical Service.

**Replenishment:**

The bath is replenished with BONDERITE M-FE LF-3851 according to the Total Acid value. To increase Total Acid by 1 point, add about 1.4 kg BONDERITE M-FE LF-3851 for each 1,000 L of bath. Automatic dosage/control with Henkel Lineguard against pH is suggested.

**Special Remarks:**

In case of oil accumulation on the bath surface, a 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 bar in all active phases, except for final passivation, where the required spray pressure can be < 0.8+1.0. Higher pressures can help degreasing.

**Caution:**

BONDERITE M-FE LF-3851 is an acid product! Follow the safety regulations. Shield eyes with tightly fitting safety glasses, wear protection gloves and acid-resistant safety clothes! Avoid contact with skin! Do not inhale vapours!

**Classification:**

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

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

**Waste Water Treatment:**

Neutralization is required. Disposal must be carried out according to the local directives.

**Storage:**

Recommended Storage Temperature	-10 to 40°C
Shelf-life, months	36

**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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