

BONDERITE® M-AC M

Known as Fixodine M
August 2020

PRODUCT DESCRIPTION

BONDERITE® M-AC M provides the following product characteristics:

Technology	Metal pretreatment
Product type	Phosphating products for metals
Application	Immersion and Spray
Process components	BONDERITE M-AC M BONDERITE M-AD 565 (for increasing pH if required)

BONDERITE® M-AC M is a powdered conditioning surface treatment used for iron and steel, ahead of a BONDERITE M-MN treatment.

It eliminates the coarse, crystalline coatings sometimes obtained on iron and steel surfaces, which have been pickled with acids or cleaned with strong alkalis.

It promotes a dense and fine crystalline phosphate coating.

Please note

BONDERITE M products are used in the surface modification of metals and usually applied in a multi-stage process. The performance of these surface treatments depends on various factors such as the preceding cleaning or etching steps, line design or process 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:

BONDERITE® M-AC M, kg 4

- Fill the tank with water.
- Add 4 kg of BONDERITE® M-AC M for each 1,000 litres of working volume.
- Heat to the operating temperature.
- A means of continuous agitation, such as a mixer, must be provided to keep the BONDERITE® M-AC M in suspension.

Operating data:

Time	1 minute minimum
pH	8.0 - 10.5
Temperature, °C	
Low temp. manganese phosphate	45 to 60
Mid temp. manganese phosphate	70 to 85
High temp. manganese phosphate	82 to 88

Your Henkel representative may advise operating conditions outside of these limits.

Process description:

The complete process normally consists of the following steps:

1. Cleaning using the recommended BONDERITE C-AK cleaner
2. Water rinsing
3. BONDERITE® M-AC M treatment
4. Treating with BONDERITE M-MN conversion coating
5. Water rinsing and subsequent treatments

BONDERITE® M-AC M is not a cleaner. The treatment is effective only on surface which are free from grease, oil, scale or other foreign matter.

Operation and Control:

Operation:

The properly cleaned articles are treated with the BONDERITE® M-AC M suspension at the recommended temperature for a minimum of one minute. Longer periods of time (up to 10 minutes) are not detrimental but are not normally required. Periodic small additions of BONDERITE® M-AC M are required to maintain activity. The bath life will depend on the particular operations.

After conditioning, the articles go directly into the manganese phosphate solution without a water rinse.

Testing and Control:

From use, and upon aging, the BONDERITE® M-AC M bath becomes less effective. Whenever the coating is not sufficiently uniform and finely crystalline in texture, the bath should be replenished by adding about 1 kg of BONDERITE® M-AC M per 1,000 litres. If two or three additions of BONDERITE® M-AC M do not produce the desired coating, discard the bath and build up a fresh one. With experience, these additions can be made at appropriate periodic intervals so that the coating is always finely crystalline. Frequently, an addition at the beginning of each shift is satisfactory.

If coating weights are monitored, a coating weights rise of 50 % over the norm indicates that the refiner tank has degraded and should be replaced. Otherwise dumping at the end of each week's operation is advisable.

If the pH of the BONDERITE® M-AC M bath drops below 8.5, add BONDERITE M-AD 565 in steps of 1L/1,000L of bath until the pH exceeds 9.0.

Equipment:

The processing tank for use with the treatment solution should be constructed of mild steel, while the mixer shaft and impeller should be of any of the 300 series of stainless steel. The heat transfer surface should be of type 316 stainless, if steam-heated, but of Schedule 80 mild steel pipe or equivalent, if gas fired.

Waste disposal information:

Applicable regulations covering disposal and discharge of chemicals should be consulted and followed.

Disposal information for the chemical, in the form as supplied, is given on the Material Safety Data Sheet.

The treatment solution contains heavy metal and phosphate. Waste treatment may be required prior to discharge to the sewer.

The treatment solution sludge can contain ingredients other than those present in the chemical as supplied and analysis of the solution and/or sludge may be required prior to disposal.

Classification:

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

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

Storage:

Recommended storage temperature, °C	-20 to 50
Shelf-life (in unopened original packaging), months	120

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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