

BONDERITE® M-FE 10210

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Product description

BONDERITE® M-FE 10210 provides the following product characteristics:

Technology	Cleaner coater
Product type	Acid 1-component
Application	Surface treatment

BONDERITE® M-FE 10210 is a gel-like liquid double action chemical for simultaneously cleaning and iron phosphating ferrous material. BONDERITE® M-FE 10210 forms on the treated surface an amorphous phosphatic coating, mainly composed by iron phosphates, which provides good adhesion for liquid, powder or electrophoretic paints. BONDERITE® M-FE 10210 produce easy clean sludge - gel-like. Subsequent partial continuous renewal rinse and possibly a final rinse with demineralized water is suggested. A suitable final passivation improves results.

Application areas:

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

Technical data

Appearance	clear, yellowish gel-like liquid
Concentration, g/L	10 to 15
Density at 20°C, (DIN 51757), g/cm ³	~1.2
pH-value (100 %)	~1,9
Temperature, °C	40 to 60

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.

Operating data:

BONDERITE® M-FE 10210 is used in two or more stages spray treatments with the following indicative working parameters:

Concentration, g/L	10 to 15
Total acid	2.3 to 3.9
pH-value	4,5 o 5,6
Temperature, °C	40 to 60
Time, min	1 to 3
Spray pressure, atm.	1 to 2

Bath make-up:

1. Fill the tank with tap water to 3/4 of the operating volume.
2. Start recirculating pumps and heat up to the working temperature.
3. Add 10 to 15 kg BONDERITE® M-FE 10210 for each 1,000 l bath volume and, if necessary, BONDERITE® M-AD 565 for pH correction.
4. Fill up the tank to the final level, heat to operating temperature and let recirculate for 15-20 min.
5. Make the controls.

Bath monitoring:

The bath solution is controlled by the following analysis:

Titration of total acid:

1. Pipette 10 ml of bath into a 250 ml flask.
2. Add about 50 ml DI water and 5-10 drops of Phenolphthalein Indicator.
3. Titrate with 0.1 N Sodium Hydroxide (NaOH) until the colour turns to stable pink for at least 30 sec.
4. The ml of 0.1 N NaOH used for the titration is the Total Acid value (V).

A standard BONDERITE® M-FE 10210 bath made up at 10 g/l has a TA value = 2,7 pts, before pH correction.

Determination of pH-value:

1. Transfer 100 ml bath in a 250 ml beaker and cool it to room temperature.
2. Measure the pH value preferably with a pH meter previously calibrated with pH 4 and 7 buffer solutions.
3. If correction are needed act as follows: BONDERITE® M-FE 10210 to lower the pH. BONDERITE® M-AD 565 to increase the pH.

Replenishment:

The bath is replenished with BONDERITE® M-FE 10210 according to the Total Acid value. To increase Total Acid by 1 point, add about 3 l of BONDERITE® M-FE 10210 for each 1000 l of bath. Automatic dosage/control with Henkel Lineguard against pH is suggested.

General information:

In the operation of the process some quantity of gel-like sludge is formed as a by-product of the coating reaction. This residue settles to the bottom of the tank and should be easily removed during maintenance of the line.

When the solution has been heated for some time, scale will form on the heating unit and must be removed at intervals so that adequate heat transfer will occur and the proper processing temperature will be maintained. To remove the scale, dry the heat transfer surface either by removing it from the solution or by pumping the solution from the tank. The scale may be removed by a suitable chemical or mechanical method.

Additionally, changes in the above mentioned process parameters may be necessary – they have to be evaluated individually and documented specifically for each production line after discussion with our Technical Service group.

Caution:

BONDERITE® M-FE 10210 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!

Waste water treatment:

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

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 30

Shelf-life (in unopened original packaging), months 6

Additional information

Disclaimer

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