

BONDERITE M-AC AL2000

September 2023

PRODUCT DESCRIPTION

BONDERITE M-AC AL2000 provides the following product characteristics:

Technology	Metal Pretreatment
Product Type	Conditioner for Zincphosphating
Application	Immersion or spray process
Process components:	
BONDERITE M-AC AL2000	Make-up + Replenishing
BONDERITE C-AK 11566-1	Make-up + Replenishing
BONDERITE M-AD 100	pH regulator
BONDERITE M-AD 565	pH regulator

BONDERITE M-AC AL2000 is a liquid activating product added to the rinsing bath prior to a dip or spray zinc phosphate treatment.

Application Areas:

BONDERITE M-AC AL2000 is effective in producing uniform and fine crystalline phosphate coatings on iron, steel, aluminum and zinc surfaces.

BONDERITE M-AC AL2000 is suitable for the use in hard water.

TECHNICAL DATA

Appearance	milky white
Density	~1.15 g/cm ³
pH-value (1% DI water 20°C)	~7 to 8

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 1,000 L:

While stirring or with the circulation pump running, the following amount is added to the bath tank filled with water:

Make-up in DI water:

BONDERITE M-AD 565	0.0 to 0.1 kg = 0.0 to 0.1 L (addition till pH 8.0 to 11.0)
BONDERITE M-AC AL2000	0.3 to 5 kg = 0.3 to 4.5 L

Make-up in hard water:

BONDERITE M-AD 100	1.0 kg = 0.6 L
BONDERITE M-AD 565	4.0 to 8.0 kg = 3.5 to 7.0 L (addition till pH 7.0 to 8.0)
BONDERITE C-AK 11566-1	0.3 kg = 0.2 L
BONDERITE M-AC AL2000	0.3 to 5.0 kg = 0.3 to 4.5 L

Operating Data:

pH-value	7.5 to 11.0
Zinc pointage	1.0 to 15
Temperature	20 to 40 °C max.
Duration of treatment	15 to 120 sec

Operation of BONDERITE M-AC AL2000 outside of this temperature range or operation in hard water without BONDERITE C-AK 11566-1 is not recommended without approval of the local Henkel Technical Customer Service representative.

When the BONDERITE M-AC AL2000 bath is no longer effective it should be discarded and a new bath should be made up.

Bath Monitoring:

BONDERITE M-AC AL2000 solution is controlled by determination of the zinc pointage.

Specified range of zinc pointage: 1.0 to 15

Titration of Zinc Pointage:

- Pipette 20 mL of homogenized bath solution into an Erlenmeyer flask and dilute with 100 ml of distilled water.
- Add with a pipette 20 mL of buffer solution (pH 10, Ammonia containing) and 30 mL of 0.01 M Titriplex III solution (EDTA).
- Add little Eriochrome black T
- Titrate with gentle shaking with 0.01 M MgSO₄ solution until the color changes from blue to purple (violet). Continue with the same solution:
- Add 10 drops of dimercaptopropanole solution. The solution turns blue.
- Titrate again with 0.01 M MgSO₄ solution until the color changes from blue to purple (violet).
- The consumption of MgSO₄ solution in mL is the zinc pointage.

