BONDERITE

Technical Data Sheet

Prepalene X

Known as Prepalene X
July 2022

PRODUCT DESCRIPTION

Prepalene X provides the following product characteristics:

Technology	Metal Pretreatment
Product Type	Conditioner for Zincphosphating
Application	Immersion or spray process
Process components:	
Prepalene X	Make-up + Replenishing
BONDERITE M-AD 4977	Make-up
BONDERITE M-AD 100	pH regulator
BONDERITE M-AD 565	pH regulator

Prepalene X is a liquid activating product based on zinc phosphate to be added to the rinsing bath before a dip or spray zinc phosphate treatment.

Application Areas:
Prepalene X is used in spray- and spray/immersion processes. It must be combined with a suitable cleaning booster.

Prepalene X is effective in producing uniform and fine crystalline phosphate coatings on iron, steel, aluminium and zinc surfaces. The product is suitable for the use in hard water.

TECHNICAL DATA

Appearance	milky white
Density	~1.15 g/cm³
pH-value (20% solution):	~7.5

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.

Bath make-up, for 1,000 L:

Fill the tank with water, start pumping and add to the bath in the following sequence:

Make-up in DI water:

BONDERITE M-AD 4977	1.0 kg = 0.6 L
BONDERITE M-AD 100	0 to 0.15 kg = 0 to 0.1 L (addition till pH 8 to 11)
Prepalene X	2 to 10 kg = 2 to 9 L

Make-up in tap water:

BONDERITE M-AD 100	1.0 kg = 0.6 L
BONDERITE M-AD 565	4 to 8 kg = 3.5 to 7 L (addition till pH 7.5 to 10.5)
BONDERITE M-AD 4977	1.0 kg = 0.6 L
Prepalene X	2 to 10 kg = 2 to 9 L

Operating Data:

pH-value	8.0 to 11.0
Zinc content	5 to 25 points
Duration of treatment	15 to 120 sec
Temperature	20 to 40 °C max.

Operation outside of this temperature range is not recommended without approval of the local Henkel Technical Customer Service/Application Engineering representative.

When the Prepalene X bath is no longer effective it shoud be discarded and a new bath should be made up.

Bath Monitoring:

Prepalene X solution is controlled by the following analysis.

Specified range Zinc Content: 5 to 25 points

Titration of Zinc Content:

- Pipette 20 ml solution into a clean 300 ml Erlenmeyer-flask.
- Add 100 ml deionized water.
- Pipette 20 mL of buffer solution (pH 10, ammonia containing) and 30 mL of 0.01 m Titriplex III (EDTA).
- Add a spatula-tip full of Eriochrome black T.
- Titrate the solution with 0.01 m magnesium sulfate solution.
- The endpoint will be shown by a colour change from blue to light red.

Continue with the same solution:

- Add 10 drops dimercaptopropanole solution.
- The solution turns blue again.

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- Titrate the solution again with 0.01 m magnesium sulfate solution.
- The endpoint will be shown by a colour change from blue to light red.
- The consumption of 0.01 m magnesium sulfate solution in ml is equal to the content of zinc.

Replenishment:

To increase the zinc content, add per missing point and per 1,000 L bath:

Prepalene X	0.4 kg = 0.35 L
BONDERITE M-AD 4977	0.08 kg = 0.05 L (zinc content <15 points) or 0.04 kg = 0.025 L (zinc content >15 points)

Remark:
The pH may be raised by adding small amount of BONDERITE M-AD 565.

Materials for analysis:

Zinc content:
special indicator paper (pH 6.5 to 10) or pH-meter
Beaker 250 mL
Pipette 30 ml
Pipette 20 ml (2)
Erlenmeyer-flask 300 mL
Burette 25 mL
Dropping bottle 25 mL
Spatula
0.01 m Titriplex III (EDTA)
0.01 m magnesium sulfate solution
buffer solution (pH 10, ammonia containing)
Eriochrome black T (mixture with sodium chloride 1:99)

20 % alcoholic 2,3-dimercaptopropanole-solution
(store below 5°C)

Classification:
Please refer to the corresponding **Safety Data Sheet** for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Recommended Storage Temperature	5 to 50°C
Shelf-life, months	6

ADDITIONAL INFORMATION

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Henkel AG & Co. KGaA
40191 Düsseldorf, Germany
Phone: +49-211-797-0

Henkel Corporation USA
Madison Heights, MI 48071
Phone: +1-248-583-9300

Henkel (China) Co. Ltd.
201203 Shanghai, China
+86.21.2891.8000