

# Prepalene X

Known as Prepalene X  
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## Product description

Prepalene X provides the following product characteristics:

<b>Technology</b>	Metal pretreatment
<b>Product type</b>	Conditioner for zinc phosphating
<b>Application</b>	Immersion or spray
<b>Process components:</b>	
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 hardwater.

## Technical data

Appearance	Milky white
Density, g/cm <sup>3</sup>	~1.15
pH-value (20% solution)	~7.5

## Direction 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, points	5 to 25
Duration of treatment, sec.	15 to 120
Temperature, °C	20 to 40 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 should 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 30mL 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.
- 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 (zinccontent <15 points) or 0.04 kg = 0.025 L (zinccontent >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 **Material Safety Data Sheets** for details on:

**Transport Regulations**

**Hazardous Information**

**Safety Regulations**

**Storage:**

Recommended storage temperature, °C	5 to 50
Shelf-life, months	6

**Additional information****Disclaimer**

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