

## BONDERITE M-NT 2040

Known as Alodine 2040  
May 2022

### PRODUCT DESCRIPTION

BONDERITE M-NT 2040 provides the following product characteristics:

<b>Technology</b>	Conversion coating
<b>Product Type</b>	Etch-passivation
<b>Application</b>	Concentration 1-3%

BONDERITE M-NT 2040 is a chromium-free etch passivation for aluminium in order to stabilize the electrical surface resistance and to improve adhesive bonding.

#### Application Areas:

BONDERITE M-NT 2040 is used in spray- and spray/immersion processes. It must be combined with a suitable cleaner.

BONDERITE M-NT 2040 can be used in an immersion and spray process.

### 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.

#### Chemical Data:

BONDERITE M-NT 2040  
BONDERITE M-NT 2040 E1  
DI water

#### Bath Make-up:

For the preparation of 1,000 L of BONDERITE M-NT 2040 solution add to 500 L of DI-water under stirring:

BONDERITE M-NT 2040	10 to 30 l or 13.6 to 40.8 kg
preferable	15 l = 20.4 kg

After complete dissolution fill up with DI-water to 1,000 L.

#### Operating Data:

Adjusting the following parameters could be necessary depending on the line conditions.

Temperature:	30 to 40
Time, sec	30 to 90
Free Acid, points	12.2 to 36.6
Reaction Titration, points	≤5

#### Bath Control:

The BONDERITE M-NT 2040 bath will be controlled by testing the Free Acid and the Aluminum concentration.

#### Free Acid (Points):

- Pipette 10 mL of a cold bath sample into an Erlenmeyer flask and dilute with 50 mL DI-water.
- Add 10 drops Bromcresol green.
- Titrate with 0.1 N NaOH until a blue colour via a green one is obtained.
- The milliliters of 0.1 N NaOH used is the Free Acid (points).

#### Adjustment:

To increase the value by 1.0 (point) add per 1,000 (L) of solution volume:

BONDERITE M-NT 2040 E1	0.8 l or 1.1 kg
or	
BONDERITE M-NT 2040	0.8 l or 1.1 kg

#### Aluminum Concentration (Points):

- Pipette 10 mL of a cold bath sample into an Erlenmeyer flask and dilute with 50 mL DI-water.
- Add 10 drops of Phenolphthalein Indicator.
- Titrate with 0.1 N NaOH until a light pink colour is obtained.
- Add a tea spoon Sodium Fluoride and dissolve. The colour is heavy pink, now.
- Titrate with 0.1 N sulfuric acid until the pink colour disappears.
- The milliliters of 0.1 N sulfuric acid used is the aluminium concentration (points).

Concentration range, points	≤5.0
Critical limit, points	15.0

Adjustment:

If the Aluminum concentration is higher than 15.0 points, the bath will be partially dumped, with DI -water refilled and readjusted.

**Classification:**

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

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

**Storage:**

Recommended Storage Temperature, °C	5 to 50
Shelf life, months (in unopened original packaging)	12

**ADDITIONAL INFORMATION****Disclaimer**

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Reference 0.2