

BONDERITE M-NT 4595 R5 MU

Known as Alodine 4595 R5 MU

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PRODUCT DESCRIPTION

BONDERITE M-NT 4595 R5 MU provides the following product characteristics:

Technology	Surface treatment
Product Type	Conversion coating
Application	Aluminium
Process components:	BONDERITE M-NT 4595 R5 MU BONDERITE M-NT 4595 R5

BONDERITE M-NT 4595 R5 MU is able to produce a chromium free conversion layer on Aluminium and its alloys. Depending on the working condition, on the Aluminium Alloy and on the conversion layer thickness, the colour of the converted surfaces ranges from colourless to slight iridescent. For the conversion process two liquid products are needed: BONDERITE M-NT 4595 R5 MU and BONDERITE M-NT 4595 R5.

The product can be used in a spraying process and as well as in an immersion application. Normally a final rinsing is used. The conversion layer provides a corrosion resistance as well as very good adhesion properties for subsequent painting. BONDERITE M-NT 4595 R5 MU technology is particularly suitable for light alloy wheels.

Application Areas:

The best application process of BONDERITE M-NT 4595 R5 MU consists in the following phases:

1. Acid or alkaline cleaning
2. Rinsing
3. Acid de-oxidation
4. Rinsing with demineralised water (max. 50 µS/cm)
5. Treatment with BONDERITE M-NT 4595 R5 MU
6. Rinsing with demineralised water (max. 50 µS/cm)
7. Drying (suggested temperature < 80°C)

DIRECTIONS FOR USE

Preliminary Statement:

Prior to use it is necessary to read the **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.

Use:

BONDERITE M-NT 4595 R5 MU is used at the following average working parameters.

Operating Data:

Points	3 to 6
Electrical conductivity, µS/cm	500 to 700
pH-value	2.6 to 3.1
Temperature, °C	30 to 40
Treatment time, sec	30 to 90

The Technical Service will suggest the best working parameters and operating sequence according to the plant. Please contact the technical service of Henkel for support.

Bath Make-up:

To prepare a 1000 l bath use demineralised water and 30 to 40 kg of BONDERITE M-NT 4595 R5 MU.

During the bath make up, the solution has a pointage ranging from 5.5 to 7.5 (according to the product concentration) and a pH value of approx. 2.7.

During the process the acidity will decrease to the right operating values and it should be kept at the recommended range during all the production.

Bath Control:

The BONDERITE M-NT 4595 R5 MU bath is controlled by determination of the Pointage.

- a) Pipette 100 ml of BONDERITE M-NT 4595 R5 MU bath into a 250 ml Erlenmeyer flask.
- b) titrate with 0,1N NaOH solution until pH value = 4.5 (pH-meter).

Replenishing:

The bath is replenished with BONDERITE M-NT 4595 R5.

For each missing point and for each 1000 l bath add 1.7 kg of BONDERITE M-NT 4595 R5.

Caution:

- Keep the bath surface free from floating pollutant (i.e. oils)
- Use Stainless steel (AISI 316) for all the plant parts in contact with BONDERITE M-NT 4595 R5
- Slight differences in product appearance do not affect its performances

Classification:

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

Hazards identification
Transport information
Regulatory information

Storage:

Process Component	Recommended Storage Temperature, °C	Shelf life, months (in unopened original packaging)
BONDERITE M-NT 4595 R5 MU	0°C - 50°C, heat-/frost-sensitive	36
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Reference 0.1