BONDERITE

Technical Data Sheet

BONDERITE M-NT 4595 R4

Known as Alodine 4595 R4
June 2015

PRODUCT DESCRIPTION

BONDERITE M-NT 4595 R4 provides the following product characteristics:

Technology	Cr-free Pretreatment
Product Type	Conversion coating
Application	Spray and Immersion
Process components:	
BONDERITE M-NT 4595 R4	
BONDERITE M-NT 4595 R4 F	

BONDERITE M-NT 4595 R4 is a liquid product for a chrome-free conversion treatment of aluminium and its alloys, special for aluminium wheels.

Application

In aqueous solutions colourless, iridescent conversion layers are produced on light metals in spray or immersion application.
They provide an excellent corrosion resistance as well as very good adhesion properties for subsequent painting.

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:
BONDERITE M-NT 4595 R4: adjust the pH to 3.9

BONDERITE M-NT 4595 R4 F: adjust to the final pH of 3.3

Starting dosing ratio:
3 parts BONDERITE M-NT 4595 R4 to 7 parts BONDERITE M-NT 4595 R4 F

Remark:
• The final dosing ratio has to be evaluated with the responsible TCS person by observing the consumption of organic components in the BONDERITE M-NT 4595 R4 bath.

• Specification of the DI-water to make up the BONDERITE M-NT 4595 R4 bath:

pH: 5 to 7
Conductivity: < 10 µS/ cm

Changes in the following parameters may be necessary and depend on local conditions:

Operating data:

pH	3.2 to 3.7
Temperature, °C	25 to 40
Spray time, sec	45 to 90
Spray pressure, bar	0.5 to 1.0
Conductivity, µS/cm	100 to 700

Bath monitoring:
The BONDERITE M-NT 4595 R4 bath is controlled by determination of the pH-value and the electrolytic conductivity.

The adjusted control parameters should be kept constant during bath operation.

Bath replenishment:
During the working process the pH of the BONDERITE M-NT 4595 R4 bath increases due to consumption of acidic components.
An addition of BONDERITE M-NT 4595 R4 F adjusts the required pH value.
Furthermore, addition of the BONDERITE M-NT 4595 R4, in correlation to the addition of BONDERITE M-NT R4 F, ensures the required level of organic components.

Caution:
BONDERITE M-NT 4595 R4 contains organic components and complex fluoro compounds.
Watch safety precautions! Shield eyes with tightly fitting safety glasses, wear rubber gloves and chemical resistant safety clothes. Avoid contact with skin! Do not inhale vapours!

Storage

Recommended Storage Temperature, °C	5 to 50
Shelf-life, months	12

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ADDITIONAL INFORMATION

Disclaimer

Note:
The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.
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