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Technical Data Sheet

BONDERITE M-FE 1070 ST

Formerly known as Duridine 1070 ST

October 2016

PRODUCT DESCRIPTION

BONDERITE M-FE 1070 ST has the following characteristics:

- **Technology:** Coating cleaning
- **Type of product:** Single-component acid
- **Application:** Spraying

BONDERITE M-FE 1070 ST is a liquid product designed for applying a thick iron phosphate coating on cold-rolled steel. It serves as an excellent substrate for subsequent finishing with liquid paint, powder coating, or electro-coating.

After treatment with BONDERITE M-FE 1070 ST, a continuously renewed rinse stage should follow, ideally with a final deionized water rinse or a final chemical rinse.

APPLICATION AREA

BONDERITE M-FE 1070 ST is used in spray treatment processes where a high-quality iron phosphating surface preparation is required before painting. It is primarily applied in general industry, automotive manufacturing, household appliances, and metal furniture production.

APPLICATION INSTRUCTIONS

General Information:

Before use, refer to the Safety Data Sheet for information on precautions and safety recommendations. General safety instructions must be followed. If needed, contact Henkel's regional Technical Service for support.

Application:

BONDERITE M-FE 1070 ST is used in spray treatment in two or more zones.

- **Concentration:** 10–40 g/L
- **Total Acidity:** 2.5–10 points

- **pH:** 4.0–5.5
- **Temperature:** 45–65°C
- **Pressure:** 1–2 bar
- **Processing Time:** 1–3 minutes

Bath Preparation:

1. Fill the tank with clean technical water up to $\frac{3}{4}$ of its working volume.
2. Turn on circulation pumps and heat to the required operating temperature.
3. Carefully add 10–40 L of **BONDERITE M-FE 1070 ST** per 1,000 L of bath solution.
4. Adjust the bath volume to the working level and mix thoroughly until fully homogenized.
5. Allow circulation for **10 minutes**, then conduct a quality check.

Control and Replenishment:

Regular concentration checks should be performed.

To **increase total acidity by 1 point**, add approximately **4 kg (3.4 L) of BONDERITE M-FE 1070 ST** per 1,000 L of bath solution.

Note:

Over time, the pH and total acidity levels of the solution may rise. Adjustments should be made based on the pH value to maintain it within the **4.0–5.5** range.

PRECAUTIONS

- It is recommended to **remove oils/grease** from the surface before treatment.
- Tanks, pumps, and other tunnel components in contact with BONDERITE M-FE 1070 ST may be made of **carbon steel**, but **stainless steel (e.g., AISI 316 or 316 L)** is preferable.
- **Spray nozzle pressure should be at least 1.5 bar** (0.8 bar is acceptable for the final rinsing/passivation zone).
- **Direct sunlight exposure** may lead to color changes, but this does not affect product quality.

STORAGE

- **Recommended storage temperature:** 0–40°C
- **Shelf life (unopened original packaging): 36 months**

If the product freezes, store it for **24 hours** at 15–20°C and mix before use.

CLASSIFICATION & SAFETY

The Safety Data Sheet contains additional information regarding:

- Hazard information
- Transport requirements
- Safety regulations

DISCLAIMER

The information provided in this **Technical Data Sheet (TDS)**, including recommendations on usage and application, is based on our knowledge and experience as of the publication date. The product has various applications and may be used under different conditions beyond our control.

Therefore, **Henkel does not guarantee** the suitability of this product for specific production processes or applications. It is strongly recommended that **preliminary testing** be conducted to confirm the product's compatibility with your specific requirements.

Unless explicitly agreed upon otherwise, Henkel is **not liable** for any results related to the product's use. This disclaimer also applies to oral and written recommendations. Exceptions are made only in cases of gross negligence, or if legally required under product liability laws.

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