

BONDERITE L-FM PRETREAT AERO

Known as TURCO Pretreat

December 2013

PRODUCT DESCRIPTION

BONDERITE L-FM PRETREAT AERO provides the following product characteristics:

Technology	Temporary protective coating
Product Type	Temporary protective coating
Application	Spray and manual

BONDERITE L-FM PRETREAT AERO is a liquid, orange-colored compound formulated to inhibit the formation of tenacious scale associated with heat treating of ferrous metals, stainless steels, nickel chrome alloys and copper alloys in non-inert gas atmosphere furnaces. It may also be used as a lubricant for hot forming of sheet titanium, hot flaring of titanium tubing, and cold forming of 17-7 PH steel plate; as a protective coating for carbon steel dies used in hot sizing operations; as a rust preventive for mild steel; and as a protective coating for copper alloys during annealing. BONDERITE L-FM PRETREAT AERO minimizes the need for the extremely corrosive acidic mixtures commonly used to descale heat-treatable alloys.

Application Areas:

BONDERITE L-FM PRETREAT AERO is used as heat treat scale inhibiting compound.

BONDERITE L-FM PRETREAT AERO offers these features:

1. Significantly reduces metal loss, intergranular oxidation and surface notching
2. Easy to use
3. Shortens descaling time
4. Minimum equipment requirements

TECHNICAL DATA

(as supplied):

Appearance	Viscous red liquid
Soild content (120°C), %	8.0 to 9.5

DIRECTION OF 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.

Use instructions

1. Pre-cleaning:

1.1. Proper precleaning is essential.: Many soils, if not completely cleaned from the metal surface prior to heat treatment, can have very deleterious effects on metals alloys during the heat treat process. Undesirable alloying with the metal surfaces, often accompanied by pitting and other serious defects, can result from failure to adequately pre-clean.

1.2. Thoroughly rinse with overflowing water (warm preferred)

1.3. Acid clean in appropriate descaling solution for 5 to 10 minutes (See TDB #496 for recommended procedures). Acid cleaning is not necessary for all conditions, but it is essential where die contaminants such as lead and zinc, not removable in alkaline precleaning, are known or suspected to be present.

1.4. Rinse with overflowing water for 2 to 3 minutes.

1.5. Allow parts to dry.

Applications:

1. After thorough cleaning and drying, apply BONDERITE L-FM PRETREAT AERO compound as soon as possible to prevent recontamination of metal surfaces.

2. BONDERITE L-FM PRETREAT AERO must be thoroughly mixed before using. The best method for application of BONDERITE L-FM PRETREAT AERO is by spray. A small amount of toluene may be added to adjust the viscosity to the proper spraying consistency. Normal paint spraying equipment such as a Binks Model #7 Spray Gun with a #36 SD tip is satisfactory for application of the thin coating necessary for protection. A spray pressure of 35# per square inch has been found satisfactory.

3. Coating thickness must not exceed 0.2 to 0.3 mils. at any location on the part. Thicker coatings will not function properly and can lead to part damage. Special caution must be taken in applying BONDERITE L-FM PRETREAT AERO to corners or other irregular surfaces. Normally, application of thin box



coatings until a uniform light orange-gold coating color appears on the surface is sufficient to obtain the recommended thickness.

4. Under normal atmospheric conditions, drying time is 1 to 5 minutes, after which time the film is normally resistant to scuffing and fingerprinting.

5. Pretreated parts must be racked in the heat treat furnace to allow free circulation of air around each part in order to properly cure the BONDERITE L-FM PRETREAT AERO coating. Furnace atmosphere must be slightly oxidizing. A reducing atmosphere prevents proper functioning of the BONDERITE L-FM PRETREAT AERO. Note: Interior furnace surfaces must be kept clean for optimum results.

Storage:

Temperature, °C	0 to 40
Shelf-life (in unopened original packaging), months	24

Classification:

Please refer to the corresponding **Material Safety Data**

Sheets for details on:

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

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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