

BONDERITE L-FG FB 412 ACHESON

Known as Deltaglaze FB-412
July 2015

PRODUCT DESCRIPTION

BONDERITE L-FG FB 412 ACHESON provides the following product characteristics:

Technology	Lubricant
Product Type	Glass dispersion
Application	Billet coating

BONDERITE L-FG FB 412 ACHESON is a dispersion of a specially developed, rigorously controlled glass frit in water. It has been designed for uncomplicated application of a protective lubricant coating onto titanium and super alloy billets for forging and extrusion.

The product has been specifically designed for dip application.

Fused BONDERITE L-FG FB 412 ACHESON coatings assist lubrication during high temperature forming operations in combination with compatible BONDERITE die lubricants.

BONDERITE L-FG FB 412 ACHESON is environmentally friendly. It does not contain solvents, and the glass frit is lead free.

Special features

- Protects titanium billets in the furnace up to four times longer than conventional lead based glazes
- Assists to control metal flow
- Reduces heat loss from the billet surface
- Lead free and solvent free

TECHNICAL DATA

Total solids, %	~52.5
Active solids, %	~45.5
Viscosity, cPs (Brookfield)	~1,500
Flash Point	non flammable
Color:	white
Diluent	water

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.

Method of Use:

Components should be thoroughly degreased before use. BONDERITE L-FG FB 412 ACHESON is supplied for use by dipping.

BONDERITE L-FG FB 412 ACHESON should be thoroughly stirred before use, care should be taken to minimise the formation of air bubbles during stirring as the presence of bubbles can adversely affect the products performance.

When dipping the work piece should be fully immersed in the product then withdrawn in one smooth slow action, this will ensure that an even coating of the correct thickness is applied.

A dipped coating will normally have a dry coating weight of about 6 mg/cm².

A coating thickness of 40 to 60 microns is recommended.

BONDERITE L-FG FB 412 ACHESON can be diluted with water if required.

Coatings should be thoroughly dry before firing to avoid damage by residual moisture.

Apply in a well ventilated area.

Application by brush is not recommended.

Method of Removal:

After forming, residual coatings are usually removed by bead blasting.

Sodium hydride treatment is possible but not recommended.

Storage:

Recommended Storage Temperature, °C 5 to 30

Shelf-life, months 12

(in unopened original packaging)

BONDERITE L-FG FB 412 ACHESON should be kept in a dry store.

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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Belgium NV, Henkel Electronic Materials NV, Henkel Nederland BV, Henkel Technologies France SAS and Henkel France SA please additionally note the following:

In case Henkel would be nevertheless held liable, on whatever legal ground, Henkel's liability will in no event exceed the amount of the concerned delivery.

In case products are delivered by Henkel Colombiana, S.A.S. the following disclaimer is applicable:

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. 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.

Any liability in respect of the information in the Technical Data Sheet or any other written or oral recommendation(s) regarding the concerned product is excluded, except if otherwise explicitly agreed and except in relation to death or personal injury caused by our negligence and any liability under any applicable mandatory product liability law.

In case products are delivered by Henkel Corporation, Resin Technology Group, Inc., or Henkel Canada Corporation, the following disclaimer is applicable:

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any production methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and of persons against any hazards that may be involved in the handling and use thereof. In light of the foregoing, **Henkel Corporation specifically disclaims all warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation specifically disclaims any liability for consequential or incidental damages of any kind, including lost profits.** The discussion herein of various processes or compositions is not to be interpreted as representation that they are free from domination of patents owned by others or as a license under any Henkel Corporation patents that may cover such processes or compositions. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide. This product may be covered by one or more United States or foreign patents or patent applications.

Trademark usage: [Except as otherwise noted] All trademarks in this document are trademarks and/or registered trademarks of Henkel and its affiliates in the U.S. and elsewhere.

Reference 0.0