

BONDERITE L-GP EB 020A EU ACHESONKnown as Dag EB-020A
July 2015**PRODUCT DESCRIPTION**

BONDERITE L-GP EB 020A EU ACHESON provides the following product characteristics:

Technology	Lubricant
Product Type	Graphite dispersion in water
Application	Battery coating

BONDERITE L-GP EB 020A EU ACHESON is one in a series of conductive coatings designed to provide controlled electrical properties.

BONDERITE L-GP EB 020A EU ACHESON is a one-component thermosetting graphite coating of unusually high conductivity.

BONDERITE L-GP EB 020A EU ACHESON is water-based and particularly useful in solvent-prohibited areas.

The electrical conductivity and corrosion protection properties of BONDERITE L-GP EB 020A EU ACHESON make it suitable for alkaline battery applications where the current collector can require protection.

Easy and reliable spray application of BONDERITE L-GP EB 020A EU ACHESON allows for maximized production speeds and economical usage which results in lower component costs.

Battery shelf life and performance are maximized to provide the required longevity of the battery and results in customer satisfaction.

Benefits:

- Maintains a conductive surface on battery current collectors and optimal performance of the battery.
- Reduces corrosion and oxidation of nickelplated steel.
- Improves the electrical contact between the cathode can and electrolyte.
- Maximal production output for low operating and component costs.
- Low VOC emissions that assist environmental compliance.

Features

- Excellent adhesion to smooth surfaced nickel-plated steel.
- Excellent chemical resistance to KOH electrolyte.
- Very low electrical resistance.
- Reliable spray application properties.
- Water based coating.

Application:

- Primary alkaline battery cells.
- Conductive coating for metal substrates.

TECHNICAL DATA**(of wet product)**

Color:	black
Pigment	graphite
Binder	thermoset
Solids content, %	~37
Viscosity, mPa.s (Brookfield 25°C, 20rpm)	~750
pH-Value	~9.7
Carrier	water
Density, kg/m ³	~1,140
Flash Point, °C	>100
Theoretical coverage	~24 m ² /kg at 10 µm

(as cured)

Color	black
Service Temperature, °C	150
<u>Sheet resistance</u> (point to point, 2.54 cm)	
Before KOH exposure	10 to 30 Ω/sq./ 25 µm
After KOH exposure (40 % solution, 72 hours at 80 °C)	10 to 30 Ω/sq./25 µm

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.

Surface Treatment

Substrates must be dry and free of contaminants (dirt, grease, powder, and other residues) before application of BONDERITE L-GP EB 020A EU ACHESON.

Mixing/Blending/Dilution

Do not dilute. BONDERITE L-GP EB 020A EU ACHESON is supplied ready to use. Before using, stir product thoroughly or use a slow speed propeller to mix until product is of uniform color and there is no settling. Do not use a paint shaker or other high-shear mixer as this could cause air entrapment.

Sieving

It is best practise to sieve the BONDERITE L-GP EB 020A EU ACHESON after mixing over a 200 to 300 micron sieve into the tank at the spray unit. This will avoid that coarse particles will end into the spray system. It will also give one the (final) check if the product is indeed homogenised correctly.

Application:

To apply, use standard airless production spray equipment. For small areas, use a suction cup gun. Production runs are best handled with propeller-agitated pressure pot systems. A dry coating weight of 10-20 mg per can is recommended for optimum electrical properties.

Curing:

BONDERITE L-GP EB 020A EU ACHESON should be air flashed for 1 to 2 minutes at room temperature.

Final cure is 3 minutes at 150 °C or 1 minute at 200 °C, 30 seconds at 230 °C.

Classification:

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

Sheets for details on:

Hazards identification
Transport information
Regulatory information

Storage:

Recommended Storage Temperature, °C	5 to 30
Shelf-life, months (in unopened original packaging)	12

Prolonged storage of BONDERITE L-GP EB 020A EU ACHESON at temperatures higher than 50 °C is not recommended. Do not allow to freeze. Empty containers may retain hazardous properties.

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