



# BONDERITE®

Technical Data Sheet

## BONDERITE S-FN TM-001A ACHESON

Known as Emralon TM-001A  
November 2015

### PRODUCT DESCRIPTION

BONDERITE S-FN TM-001A ACHESON provides the following product characteristics:

<b>Technology</b>	Lubricant
<b>Product Type</b>	PTFE dispersion in water
<b>Application</b>	Dry film lubricant

BONDERITE S-FN TM-001A ACHESON is one of a series of Henkel resin-bonded lubricant coatings formulated to provide dry film lubrication in a variety of industrial and consumer applications.

It is a flexible, water-based coating specially designed for flexible substrates.

It is a resinbonded polytetrafluorethylene (PTFE) lubricant specially designed to prevent binding, seizing, sticking and tearing of rubber and plastic parts during production and assembly.

BONDERITE S-FN TM-001A ACHESON's clean, dry film protects substrates from oil, alcohol, petrol, some inorganic acids, abrasive substances, dirt and contaminants, giving longer wear life and reduced maintenance.

It is an ideal low friction coating for substrates where operational flexibility is a major consideration.

### Special features

- Non-flammable
- Ready for use, requires no thinning
- Easy application
- Excellent covering power resulting in extremely low coating cost per unit
- Excellent adhesion
- Very flexible, even on highly deformable substrates such as rubber
- Flexibility retained over a wide temperature range
- Low and constant coefficient of friction.
- Ultra thin film (5 to 15 µm)
- Easy clean-up of application equipment simply by using water
- Unaffected by oil
- Resists alcohol, gasoline and some inorganic acids
- Extends wear life

### Application Areas

Rubber "O" rings (minimises damage during assembly)  
Flexible diaphragms  
Gaskets  
Leather washers  
Plastic or fibre threads  
Valve seals  
Elastomers  
Fibre bearings

### TECHNICAL DATA

#### (of wet product)

Pigment	PTFE
Binder	thermosetting resin
Solids content	~20.2
Viscosity (Brookfield 25 °C, 30 rpm)	<35
Density, kg/m <sup>3</sup>	~1,080
Diluent	water

#### (as cured)

Color	translucent
Texture	smooth
Static coefficient of friction	0.08 to 0.1
Maximum service temperature:	
continuous, °C	150
Recommended film thickness, µm	5 to 15
intermittent, °C	175
Fuel and oil resistance	good
Solvent resistance	good against aliphatic and aromatic hydrocarbons

### 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.

#### Pretreatment

Substrates to be coated should be clean and dry, free from contamination and residues such as dirt, grease or powder before applying BONDERITE S-FN TM-001A ACHESON.

To ensure maximum adhesion, clean the parts chemically with ethanol, acetone, or another suitable solvent.

If large amounts of powder or parting agent are encountered on moulded parts, ultrasonic cleaning is recommended.

Air dry all parts after chemical cleaning.

A pre-bake can be used to drive off entrapped solvents.

Rubber compounds should be tested for solvent compatibility, since prolonged contact with some solvents will cause swelling.



**Application**

BONDERITE S-FN TM-001A ACHESON is ready-for-use.

Stir gently prior to use to homogenise the product.

Vigorous agitation should be avoided.

To obtain the most uniform coating BONDERITE S-FN TM-001A ACHESON should be applied by spray techniques to a thickness of 5 to 15 µm in two to four passes.

A very thin initial spraying pass is recommended to increase wetting ability of the product and to permit enough drying to avoid runs.

Application of the product on a preheated (70°C) part will improve the coating appearance.

The product should be applied with a pressure of about 2 bar and a nozzle opening of 1.0 mm.

BONDERITE S-FN TM-001A ACHESON may also be applied by brush or dip.

However the coating will be more irregular.

Immediately after use flush the spraygun with water and then with acetone to prevent clogging.

**Curing**

For optimum coating and lubrication performance, a curing cycle of 30 minutes at 150°C (substrate temperature) is recommended using either a circulating oven or infrared lamps.

A longer time, lower temperature cycle will not produce an equivalent cure.

There is no pronounced colour change to determine when curing is complete, but the glossy appearance and slight tackiness of an air-dried coating becomes dull and velvety when cured.

**Storage**

Recommended Storage Temperature, °C	5 to 25
Shelf-life, months (in unopened original packaging)	12

Keep from freezing.

**Classification**

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

**Sheets** for details on:

**Hazardous Information**  
**Transport Regulations**  
**Safety Regulations**

**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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