

BONDERITE L-GP M 709 ACHESON

Known as Molydag 709
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PRODUCT DESCRIPTION

BONDERITE L-GP M 709 ACHESON provides the following product characteristics:

Technology	Lubricant
Product Type	Molybdenum disulphide dispersion in solvent
Application	Dry film lubricant

BONDERITE L-GP M 709 ACHESON is a single pack, solvent based lubricant system that operates under high load conditions on metal surfaces.

The coatings may be air dried, however, they should be heat cured to develop the full properties which include lubrication, a wide temperature range, excellent wear life and resistance to corrosion.

This product is approved by the Ministry of Defence under specification number DTD 90/4647.

Special Features:

- One component system
- Clean, easy application
- High load carrying capacity
- Excellent lubricity
- Wide temperature range
- Good surface adhesion to most substrates
- Life long lubrication in many applications

Application Areas:

Due to its high stability this product can be used in hard water without the risk of precipitations.

Typical application of dry film lubrication to achieve long lasting, high load lubrication on metal surfaces, such as:

- Pre-treatment for moving parts (Gears, Couplings, Bearings, Shafts).
- Assembly lubrication.
- Anti-Seize protection.

TECHNICAL DATA

(of wet product)

Pigment	molybdenum disulphide
Binder	thermosetting resin
Solids content, %	~50

Viscosity (BS cup 18 to 22° C), sec.	~29
Flash Point, °C	4
Density, kg/m ³	~1,300
Theoretical coverage, m ² /kg/ 10µm	20
Diluent	xylene, toluene, white spirit

(as cured)

Color:	dark greenish grey
Coefficient of friction	~0.07*
Min. service temperature, °C	-50
Max. service temperature, °C as a lubricant)	200
Max. service temperature, °C (to prevent seizure of threaded joints and similar assemblies)	400

*Lower figures are obtained under very high loads. Low friction values are maintained in a vacuum.

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

All surfaces should be dry and free of contaminants such as dirt, grease and powder. Smooth surfaces should be roughened with grade 'O' emery cloth. Although a solvent wipe is suitable for many applications, for maximum performance the following pre-treatment are recommended:

Steel	degrease, sandblast and phosphate
Stainless steel	steel degrease, sandblast and oxalate
Aluminium	degrease, sandblast and anodise
Copper alloys	degrease, sandblast and acid etch or chromate
Zinc alloys	degrease, sandblast and chromate

Dilution & Mixing:

BONDERITE L-GP M 709 ACHESON should be well stirred before use, to re-disperse the sediment that forms on standing. BONDERITE L-GP M 709 ACHESON is a concentrate and



should normally be diluted for use with a compatible solvent. Suitable dilution ratios for the different methods of application are suggested below.

However, the correct dilution ratio and solvent for each individual application must be determined by small scale testing, and specific recommendations will be provided on request.

(After dilution, the ready for use material requires occasional agitation to keep the dispersed molybdenum disulphide in complete suspension).

Brushing

Dilute with up to one volume of diluent, toluene or xylene are recommended for brush application at room temperature. A small soft-haired brush should be used to give a thin smooth coating.

Dipping

Dilute with one volume of diluent. For fast drying of components at room temperature use toluene. It is often convenient to coat components by dipping them while still hot from a vapour degreaser. For this purpose white spirit is the most suitable diluent.

Spraying

The addition of between one and three volumes of diluent is recommended. Toluene, or xylene are suitable for spray coating surfaces up to 50°C. Use an external atomising spraygun with air pressure between 2 to 3 bars. Build up the coating in several spray passes. Three or four coats are needed to give optimum lubrication and wear resistance.

Coating Thickness

Each spray pass should provide a dry coating thickness of approx. 4 to 5 µm. The total thickness of the coating should lie between 10 and 15 µm. For maximum wear life and adhesion, coatings should not exceed 15 µm.

Drying:

Coatings must be allowed to air dry and harden before use. At room temperature, hardening will require at least a hour after the coatings have become touch dry. This hardening process can be accelerated by warming e.g. by infra-red lamps or hot air blowing.

Curing:

For maximum adhesion, wear life and chemical resistance, the coatings must be cured: 60 minutes at 200°C gives a good cure.

Cleaning up

Clean spray guns and equipment immediately after use with xylene.

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 35
Shelf-life, months	18

(in unopened original packaging)

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.

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Reference 0.1