

## BONDERITE® L-GP M 709 ACHESON

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### PRODUCT DESCRIPTION

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

|                     |                                             |
|---------------------|---------------------------------------------|
| <b>Technology</b>   | Lubricant                                   |
| <b>Product type</b> | Molybdenum disulphide dispersion in solvent |
| <b>Application</b>  | 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.

### 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 <sup>3</sup>                     | ~1,300                        |
| Theoretical coverage, m <sup>2</sup> /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 400 assemblies) |                    |

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

### DIRECTIONS FOR USE

#### Preliminary statement

Prior to use it is necessary to read the **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 incomplete 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 **Safety Data Sheets** for details on:

- Hazards identification
- Transport information
- Regulatory information

Storage

|                                                     |         |
|-----------------------------------------------------|---------|
| Shelf life (in unopened original packaging), months | 18      |
| Recommended storage temperature, °C                 | 5 to 35 |

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