

高效润滑脂 AL-M



含二硫化钼的长效润滑 | 附着力强且耐高压

WEICON高效润滑脂AL-M能长效降低摩擦和磨损，适用于各种滚动与滑动轴承、关节接头、杠杆、滑道、主轴、凸轮轴、花键轴、弹簧、开式齿轮、蜗轮，以及所有允许使用脂类润滑剂的滑动速度。

|                 |                       |                   |
|-----------------|-----------------------|-------------------|
| 特性              |                       |                   |
| 基础油             | 矿物油                   |                   |
| 基础增稠剂           | 锂皂/钙皂/二硫化钼 (MoS2)     |                   |
| 是否含硅            | 不含                    |                   |
| 颜色              | 黑色                    |                   |
| 名称缩写            | DIN 51502             | KF 2 K -20        |
| 质地分类            | DIN 51818             | NLGI-第2级          |
| 保质期             | 室温下                   | 24 个月             |
| 物理参数            |                       |                   |
| 密度              | (+20°C) DIN 51757     | 0,92 g/cm³        |
| 基础油粘度 (40 °C)   | DIN 51 562            | 160 mm²/s         |
| 基础油粘度 (+100 °C) | DIN 51 562            | 15 mm²/s          |
| 润滑脂锥入度          | DIN ISO 2137          | 265 - 295 1/10 mm |
| 热力参数            |                       |                   |
| 耐温范围            | -20°C至+120°C          |                   |
| 滴点              | IP 396                | > 170 °C          |
| 热容量             | DIN EN ISO 22007-4    | 1,766 J/(g·K)     |
| 热传导率            | DIN EN ISO 22007-4    | 0,491 W/m·K       |
| 热扩散率            | 0,303 mm²/s           |                   |
| 机械性能            |                       |                   |
| 耐水性             | DIN 51807             | 1 - 90            |
| EMCOR腐蚀测试       | DIN 51802标准 (蒸馏水)     | 0 / 0             |
| VKA-测试 最大无卡咬负荷  | DIN 51350             | 3.200 N           |
| VKA-测试 烧结负荷     | DIN 51350             | 3.400 N           |
| VKA-测试 球冠值      | DIN 51350 (1分钟/1000N) | 0,5 mm            |
| 转速特性值           | 400.000               |                   |

高效润滑油脂

高效润滑油脂

電化學參數

|        |                       |            |
|--------|-----------------------|------------|
| 介电强度   | DIN EN 60243-1 (20°C) | 11,5 kV/mm |
| 许可与标准  |                       |            |
| ISSA编码 | 53.052.01/02          |            |
| IMPA编码 | 450435/36             |            |

使用须知

使用WEICON产品时，需注意我们在EG材料安全数据表 (www.weicon.cn) 上所列出的关于产品在物理、安全、毒理和生态方面的详细参数与规定。

涂抹

可使用处理抹刀或多功能刮铲Flexy将高效润滑脂AL-M以所需用量涂抹到需要润滑的部件上。该产品的400g胶瓶包装可借助手动杠杆式润滑脂枪，遵照德标DIN1283等规范，进行轻松操作。

储藏

WEICON 高性能润滑脂应储藏于室温且干燥的室内环境中；未开封产品的存储温度应在+18°C至+28°C的范围内，而开封的产品则需要重新进行气密密封。

配件

|          |                        |
|----------|------------------------|
| 10000147 | 清洁剂S, 500 ml, 透明       |
| 10000347 | 清洁剂S, 5 L, 无色, 透明      |
| 10039119 | 快速清洁喷剂, 500 ml, 无色, 透明 |
| 10055297 | 工业清洁剂, 500 ml          |
| 10010887 | 处理抹刀, 1 件              |
| 10022562 | 处理抹刀, 1 件              |
| 10010066 | 多功能刮铲 Flexy, 1 件       |
| 10065455 | 刷子35, 长, 粘合剂, 1 件      |

建议使用的辅助工具

润滑脂枪、无纺布 润滑脂枪、

可选择的包装容量

|          |                         |
|----------|-------------------------|
| 10016733 | 高效润滑脂 AL-M , 0,4 kg, 黑色 |
| 10016735 | 高效润滑脂 AL-M , 1 kg, 黑色   |
| 10016739 | 高效润滑脂 AL-M , 25 kg, 黑色  |

换算表格

|                               |                      |
|-------------------------------|----------------------|
| (°C x 1,8) + 32 = °F          | Nm x 8,851 = lb·in   |
| mm/25,4 = inch                | Nm x 0,738 = lb·ft   |
| µm/25,4 = mil                 | Nm x 141,62 = oz·in  |
| N x 0,225 = lb                | mPa·s = cP           |
| N/mm <sup>2</sup> x 145 = psi | N/cm x 0,571 = lb/in |
| MPa x 145 = psi               | kV/mm x 25,4 = V/mil |

重要提示  
本技术参数表中所列出的所有信息和建议均不得视为对产品特性的保证。这些信息来源于我们的实验室测试结果和经验。然而，鉴于我们并不知悉每位用户的实际应用情况，无法确保其遵守操作条件，因而对相关信息不承担任何责任。我们仅能对我们产品始终如一的高品质作出保证。建议用户通过足量的自行测试来确定相关产品是否能够实现您所期待的效果。与此相关的任何索赔要求都不予考虑。对于未遵照相关操作规程或将产品用于陌生用途的情况，用户须独自承担全部责任。

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高效润滑脂 AL-M

高效润滑油脂

|                 | 高效润滑脂 AL-W | 高效润滑脂 AL-M | 高效润滑脂 AL-F | 高效润滑脂 AL-T | 高效润滑脂 AL-H | 硅基润滑脂 | 高粘度 食品级硅基润滑脂 HV |
|-----------------|------------|------------|------------|------------|------------|-------|-----------------|
| 滚动轴承            | x          | x          | x          | x          | x          |       |                 |
| 滑动轴承            | x          | x          | x          | x          | x          |       |                 |
| 链条              | x          |            |            |            |            |       |                 |
| 关节 或 接头         | x          | x          | x          | x          | x          | x     | x               |
| 杠杆 或 拉杆 (语境依)   | x          | x          | x          | x          | x          | x     | x               |
| 直线导轨 或 滑动导向     | x          | x          | x          | x          | x          | x     | x               |
| 线性导轨系统 或 直线运动系统 |            |            |            | x          | x          | x     | x               |
| 主轴 或 纺锤 (语境依)   | x          | x          | x          | x          | x          | x     | x               |
| 花键轴             | x          | x          | x          | x          |            |       |                 |
| 凸轮轴             |            | x          | x          |            |            |       |                 |
| 弹簧              |            | x          |            |            |            |       |                 |
| 开式齿轮 或 开放式齿轮    | x          | x          | x          |            |            |       |                 |
| 蜗杆传动 或 蜗轮蜗杆减速机  | x          | x          | x          |            |            |       |                 |
| 钢丝绳             | x          |            |            |            |            |       |                 |

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### Miscibility of WEICON Allround Lubricant with other greases

The best results when using WEICON Allround Lubricant high-performance greases can only be achieved after complete removal of all grease residues. In practice, however, complete removal of such grease residues is sometimes impossible. In these cases, it is necessary to test whether the WEICON product intended for use is generally compatible with the grease still present. This test must be carried out on the basis of the two main components of the grease (base oil and thickener). Both main components must be miscible (compatible).

### Miscibility of base oils

| Base oil                                | Mineral oil<br>(AL-M, AL-W, AL-F, AL-T) | Polyalphaolefins<br>(AL-H) | Ester | Polyglycol | Silicone (methyl) | Silicone (phenyl) | Polyphenyl ether | Perfluoropolyether oil |
|-----------------------------------------|-----------------------------------------|----------------------------|-------|------------|-------------------|-------------------|------------------|------------------------|
| Mineral oil<br>(AL-M, AL-W, AL-F, AL-T) | ---                                     | ++                         | ++    | 0          | 0                 | +                 | 0                | 0                      |
| Polyalphaolefins<br>(AL-H)              | ++                                      | ---                        | ++    | 0          | 0                 | 0                 | 0                | 0                      |
| Ester                                   | ++                                      | ++                         | ---   | ++         | 0                 | ++                | ++               | 0                      |
| Polyglycol                              | 0                                       | 0                          | ++    | ---        | 0                 | 0                 | 0                | 0                      |
| Silicone (methyl)                       | 0                                       | 0                          | 0     | 0          | ---               | +                 | 0                | 0                      |
| Silicone (phenyl)                       | +                                       | 0                          | ++    | 0          | +                 | ---               | ++               | 0                      |
| Polyphenyl ether                        | 0                                       | 0                          | ++    | 0          | 0                 | ++                | ---              | 0                      |
| Perfluoropolyether oil                  | 0                                       | 0                          | 0     | 0          | 0                 | 0                 | 0                | ---                    |

++ = miscible    + = limited resistance    0 = not miscible

Date: 13/06/2024

### Miscibility of thickeners

| Thickener                        | Ca soap<br>(anhydrous)<br>(AL-W) | Ca-complex soap | Li soap<br>(AL-F) | Li-complex soap | Li/Ca soap<br>(AL-M) | Na soap | Gels* | Ba-complex soap | Al-complex soap<br>(AL-H, AL-T) | Polyurea |
|----------------------------------|----------------------------------|-----------------|-------------------|-----------------|----------------------|---------|-------|-----------------|---------------------------------|----------|
| Ca soap<br>(anhydrous)<br>(AL-W) | ---                              | ++              | ++                | ++              | ++                   | 0       | ++    | ++              | 0                               | ++       |
| Ca-complex soap                  | ++                               | ---             | ++                | ++              | ++                   | 0       | ++    | ++              | 0                               | ++       |
| Li soap<br>(AL-F)                | ++                               | ++              | ---               | ++              | ++                   | 0       | ++    | ++              | 0                               | ++       |
| Li-complex soap                  | ++                               | ++              | ++                | ---             | ++                   | 0       | 0     | ++              | ++                              | 0        |
| Li/Ca soap<br>(AL-M)             | ++                               | ++              | ++                | ++              | ---                  | 0       | ++    | ++              | 0                               | ++       |
| Na soap                          | 0                                | 0               | 0                 | 0               | 0                    | ---     | ++    | ++              | 0                               | ++       |
| Gels*                            | ++                               | ++              | ++                | 0               | ++                   | ++      | ---   | ++              | 0                               | ++       |
| Ba-complex soap                  | ++                               | ++              | ++                | ++              | ++                   | ++      | ++    | ---             | ++                              | ++       |
| Al-complex soap<br>(AL-H, AL-T)  | 0                                | 0               | 0                 | ++              | 0                    | 0       | 0     | ++              | ---                             | ++       |
| Polyurea                         | ++                               | ++              | ++                | 0               | ++                   | ++      | ++    | ++              | ++                              | ---      |

++ = miscible    0 = not miscible

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## WEICON lubricants and their behaviour towards sealing materials (elastomers)

| Elastomers                           | Product |      |      |      |      |                 |                    |
|--------------------------------------|---------|------|------|------|------|-----------------|--------------------|
|                                      | AL-T    | AL-M | AL-W | AL-H | AL-F | Silicone Grease | Silicone Grease HV |
| ACM acrylate rubber                  | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| CR chloroprene rubber                | +       | +    | +    | +    | +    | ++              | ++                 |
| CSM chlorosulphonated PE rubber      | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| EPDM ethylene propylene diene rubber | --      | --   | --   | --   | --   | ++              | ++                 |
| FKM fluoro rubber                    | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| NBR nitrile butadiene rubber         | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| NR natural rubber                    | 0       | --   | --   | --   | --   | ++              | ++                 |
| SBR styrene butadiene rubber         | 0       | --   | --   | --   | --   | ++              | ++                 |
| SQM/MVQ silicone rubber              | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |

++ = resistant    + = limited resistance    0 = not tested, preliminary tests or resistance tests are recommended    -- = not resistant

Date: 13/06/2024

## WEICON lubricants and their behaviour towards plastics

| Plastic                                               | Product |      |      |      |      |                 |                    |
|-------------------------------------------------------|---------|------|------|------|------|-----------------|--------------------|
|                                                       | AL-T    | AL-M | AL-W | AL-H | AL-F | Silicone Grease | Silicone Grease HV |
| ABS                                                   | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| CA cellulose acetate                                  | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| EPS expanded polystyrene                              | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PA polyamide                                          | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PC polycarbonate                                      | --      | --   | --   | +    | --   | ++              | ++                 |
| PE polyethylene                                       | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PE-UHMW polyethylene with ultra high molecular weight | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PE-LD polyethylene with low density                   | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PET polyethylene terephthalate                        | +       | +    | +    | ++   | +    | ++              | ++                 |
| POM polyoxymethylene                                  | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PP polypropylene                                      | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PPO polyphenylene oxide                               | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PS polystyrene                                        | +       | +    | +    | ++   | +    | ++              | ++                 |
| PTFE polytetrafluoroethylene                          | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| PUR polyurethane                                      | +       | +    | +    | ++   | +    | ++              | ++                 |
| PVC polyvinyl chloride                                | ++      | ++   | ++   | ++   | ++   | ++              | ++                 |
| TPE thermoplastic elastomers                          | 0       | 0    | 0    | 0    | 0    | ++              | ++                 |

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The stated resistances are based on laboratory tests and literature references. Due to the large number of raw materials used on the one hand and the complex chemical and morphological structure of the polymers on the other, no guarantee can be given. In critical applications, we recommend carrying out tests and/or consulting our application technology department.