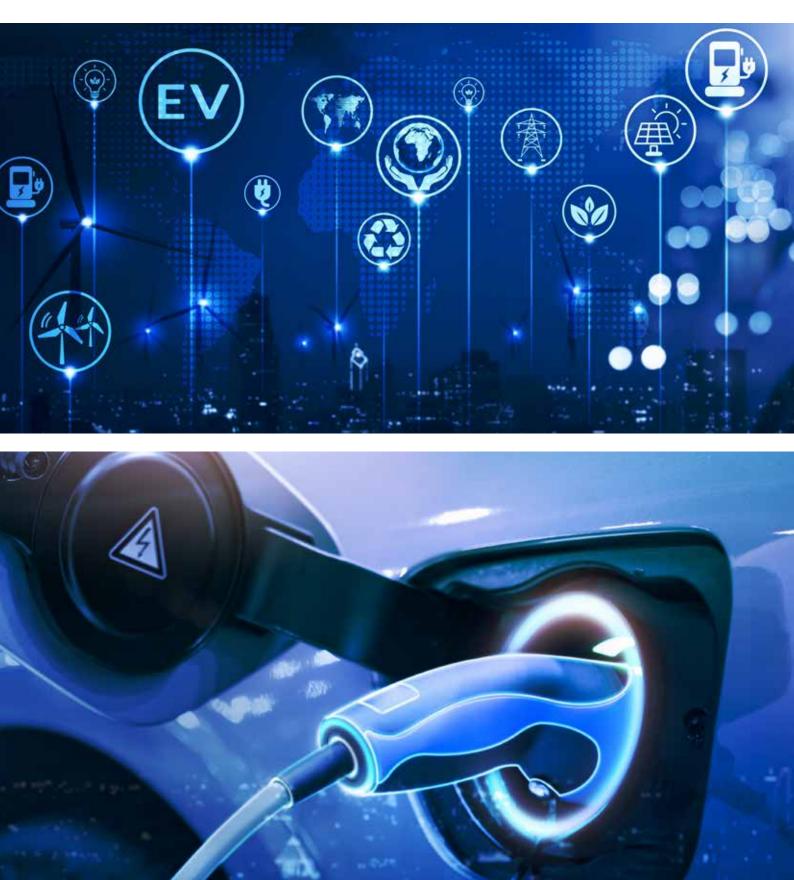


# Lubrication Engineering



#### WWW.LUBRILOG.FR

### LUBRICATION REVOLUTION

**With over 30 years in manufacturing special lubricants,** Lubrilog is strengthening every day its presence in worldwide automotive industry.

Highly specialized in designing and manufacturing special lubricants, **Lubrilog is a pioneer in the new mobility sector with references in electrical contacts and fuel cells systems for more than 5 years.** 

Oriented and animated by innovation and sustainability, Lubrilog is now part of TotalEnergies, and can count on strong R&D and commercial resources to remain a key actor in the automotive tribology expertise of today and tomorrow.

#### OUR EXPERTISE

#### The right lubricant for your application !

With its own R&D laboratory dedicated to Automotive and specialty greases, Lubrilog develops specific lubrication solution to answer to any technical concern. Every lubrication situation is unique : materials, torque, speed, temperature are always key parameters to consider in the initial development. Our technical service is at your disposal to define the suitable specifications of your future Lubrilog product !

#### Proximity

Lubrilog products are sold by TotalEnergies, with a presence in more than 150 countries. Our teams are ready to assist you locally, guiding you to the best solutions !

#### R&D

New mobility solutions are creating new constraints, due to high current, new materials and higher rotation speed. We are involved in new mobility applications for already more than 10 years, developing the new lubricant generation for your new constraints. **Contact us now !** 





### **Electrical contacts**

Contact lubricants can be greases or oils, specifically formulated to reduce wear and corrosion on the electrical contacts, switches and connectors.

Contact lubricants must be highly resistive to avoid electro-erosion, guaranteeing a long service life and reliability of the contact.



#### **APPLICATIONS**

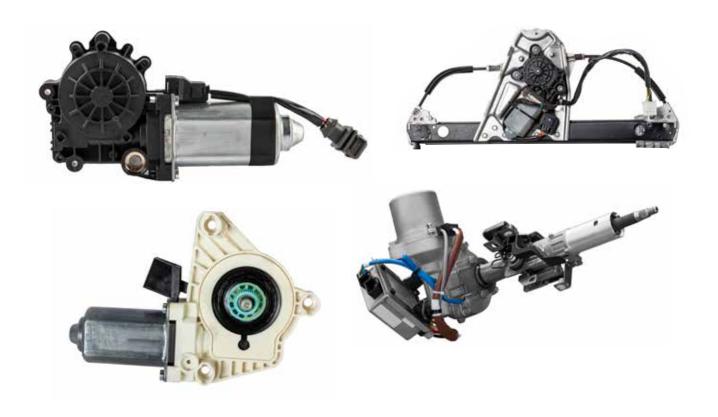
- Low voltage or low current connectors
- High tension electrical contacts and switches
- EV charging plugs
- Battery and Inverter connectors
- Electric motors (wiper system, window lifter)
- Interior switches

#### **ADVANTAGES**

- Anticorrosion and anti-wear properties
- Long term efficiency
- Compatibility with plastics and elastomers
- High breakdown voltage
- · Low starting and operating torque
- Good resistance to high and low temperatures

#### **REFERENCES AND HOMOLOGATIONS**

BOSCH • VALEO • INTEVA • ARAYMOND • CROUZET • DELPHI TECHNOLOGIES • RENAULT



### **Mechatronic**

Mechatronic systems require a specific attention as far as there is an important torque transmission on a very limited contact, usually with POM gears. Every system is unique, and picking the right product is crucial to ensure the reliability and durability in every condition.



#### **APPLICATIONS**

- Electric motors (wiper, window lifter, seat)
- Actuators (E-charge, fuel trap, rear view mirrors)
- Active Suspension system
- Electric power steering
- Electronic parking brake
- Electric tailgate closure system

#### **ADVANTAGES**

- Anti-wear and extreme pressure properties
- Long term efficiency
- Compatibility with plastics and elastomers
- Noise damping
- Adhesiveness and protection against dust
- Good resistance to high and low temperatures
- Resistance to water and humid atmosphere

#### **REFERENCES AND HOMOLOGATIONS**

VALEO · INTEVA · JTEKT · JOHNSON ELECTRIC · FICOSA AUTOMOTIVE



### Interior components

Interiors are becoming more and more complex with electronic, high material diversity and stringent regulations on air quality. The noise and the haptic are becoming key parameters with electric vehicles. The choice of a lubricant has never been such a challenge !



#### **APPLICATIONS**

- Seat rail and recliner
- Air ducts and HVAC systems
- Glove box
- Sun visor
- Airbag, safety belts systems
- Dashboard and steering wheel commands
- Control pod
- Central armrest

#### **ADVANTAGES**

- Long lasting lubrication
- Odorless, colorless
- Noise damping property and very good haptic
- No formaldehyde, ultra low VOC and FOG
- Compatibility with elastomers and plastics
- Anti stick-slip

#### **REFERENCES AND HOMOLOGATIONS**

FAURECIA · VALEO · GRUPO ANTOLIN · GROUPE PLASTIVALOIRE · MOTHERSON · U-SHIN



#### Window lifter motor

Anti-wear low-temperature greases for gear/worm contact **Plastogrease WAC 2 Plastogrease WMG 2** 



#### Air vent mechanism

Silicone Free and ultra low VOC and FOG products **Plastogel TS 1200** 





# Mechanical control panel

Good damping and haptic performances Plastogel TS 400 Plastogel TS 1200

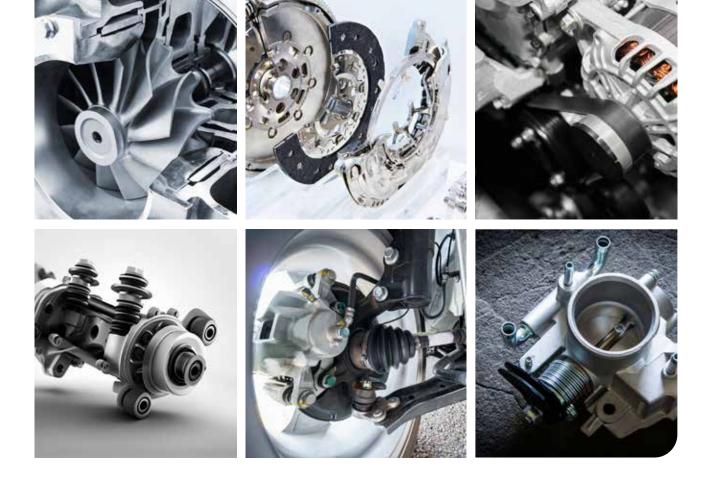


# Central armrest sliding parts

Good damping and haptic performances Fluolog K 500 Plastogel TS 1200

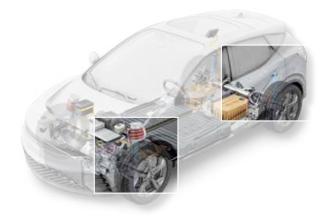
#### Seat rails & recliners

Anti-wear and adhesive greases for seat recliners and rails **Plastogrease TAC Starlog GS 2** 



# Powertrain systems

Powertrain environment is hot, dusty and sometimes corrosive due to the presence of exhaust gases. The lubrication of any system surrounding the engine or gearbox require specific properties to avoid any breakdown which could lead to severe damage to the entire powertrain system.



#### **APPLICATIONS**

- Valves (EGR, Water, Throttle)
- Dual Mass Flywheel
- Wheel bearings and seals
- Constant velocity joints
- Silent bloc
- Car shock absorbers
- Steering systems
- Anti-roll bar

#### **ADVANTAGES**

- High water and detergent resistance
- Extreme pressure properties
- Excellent metal adherence
- Resistance to high temperature and corrosive atmosphere
- Compatibility with elastomers and plastics

#### **REFERENCES AND HOMOLOGATIONS**

ZF-TRW • VALEO • CONTINENTAL • PAULSTRA • HUTCHINSON

### **Powertrain components**

## High current contactors

Extreme dielectric performance, low/high temperature, compatibility with plastics & elastomers Fluostar SX 0 Fluostar 2 L



#### Charging plug protection

Compatible and protection for EPDM and other elastomers, water and dust resistance, good dielectric performance

> Fluocor S Fluocor SST



#### **Ignition coil**

Extreme dielectric performance, compatibility with silicone and other elastomers Fluostar 2 L



#### Starter - ORC/ Gears/Bearing

High performance greases for each lubrication point Silog 33 Plastoplex 32 TF Speed LP 2

#### EGR valve Lip seal/Needle bearing

Anti-wear properties, high temperature, corrosive gases Fluostar 2 L Fluolog K 400











# Exterior components

Exterior parts are exposed to UV, low or high temperatures, dust or even salty environments. The lubricant choice is not only conducting by its intrinsic performance, but also its ability to stay in the contact during the entire life of the system.



#### **APPLICATIONS**

- Sunroof rails
- Door latches and handles
- Door checks
- Brake caliper
- Wheel bearings
- Rear view mirrors

#### **ADVANTAGES**

- Long-lasting lubrication
- Odorless, colorless
- Noise damping property and very good haptic
- No formaldehyde, ultra low VOC and FOG
- Compatibility with elastomers and plastics
- Anti stick-slip

#### **REFERENCES AND HOMOLOGATIONS**

ACS GROUP • VALEO • JOHNSON ELECTRIC • KNORR-BREMSE • CEBI

#### **Door latches**

Anti-wear properties, low-temperature grease Graisse 3924 Plastogrease WAC 2

#### **Sunroof rails**





#### Wiper motors

Adhesive and antiwear grease to protect gear and worm contact from -40 to 90 °C Plastogrease WMG 2



#### Clutch Hydraulic Systems

Compatible with EPDM and other elastomers, avoid squeak noise Fluolog K 259 Fluolog KEM

#### Electromechanical Brake Booster

EPDM compatibility and high lubricity even under severe conditions Starlog PG 2 L TF



#### Air duct and HVAC systems

Silicone free and ultra low VOC and FOG products Plastogel TS 400 Plastogel TS 1200



## Adaptive front-lighting system

PFPE dispersion with low evaporation at high temperature Lubrilog LY F 220 DVY/10

#### Camera washing system

Compatible with EPDM and other elastomers, avoid squeak noise, water resistance Fluostar 2 L









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