



# LS 818

## GRAPHITE ANTI-FRICTION COATING

smartGLEIT LS 818 is a water based anti-friction-coating containing an organic binder resin and a synergistic combination of solid lubricant with graphite.

### Product Features

After application and evaporation of the solvent (water), smartGLEIT LS 818 will result in a dry, grey-black solid film layer with good adhesion on the surface. smartGLEIT LS 818 can be used as dry film lubricant as well as a hybrid lubrication system in combination with oil or grease.

- Grey-black, dry film lubricant
- Good adhesion on most substrates
- Very high pressure resistance
- Low, stable and reproducible coefficient of friction
- Good oil resistance
- Wide temperature range from -70 to +250 °C
- Water based
- Effective against stick-slip

### Product Application

smartGLEIT LS 818 can be used as dry lubricant in all applications where lubrication with oil or grease is not possible. LS 818 is perfect for dry lubrication of mechanical elements during assembly or improving the running-in procedure of highly loaded components.

smartGLEIT LS 818 is also well suited for metal forming processes of critical materials. Cold fretting will be avoided and a high degree of deformation is possible.

Typically LS 818 is applied on:

- Bushings, gears, rivet bolts and dowel pins
- Bolts and nuts of stainless steel
- Washers
- Metal forming – cold extrusion, hydroforming, bulging, upsetting

### Instructions for Use

- smartGLEIT LS 818 usually is used as delivered. Following application methods are possible:
  - Spraying – all industry standard methods are possible
  - Dip-coating – especially effective with bulk material or non scooping parts
  - Dip-spin-coating - the industry standard for bulk materials - also for scooping parts
  - Paint-roller or brush-application – when other methods are not possible
- Stir well before use and also regularly during use – Please take care that the fluid vortex is laminar, so no air will be stirred into the product.
- smartGLEIT LS 818 should be applied on clean surfaces only.
- We recommend a layer thickness of approx. 5 to 20 µm.
- Water of at least drinking water quality (de-ionised water preferred) can be used as diluent.

- Usually only one friction partner is coated - ideally the one „with the longer sliding distance“ .
- After the wet film is applied, the solvent must be evaporated to get a dry film. We recommend preheating the parts to be coated (approx. 60 - 90 °C / 140–194 °F and / or drying with warm air (~60–120 °C/ ~140–248 °F). Besides speeding up the process this will help to generate an even coating. In general the wet time of the applied coating should be kept as short as possible.
- The coating equipment should be cleaned after the job is done - please close the coating bath or the container after work.
- Avoid burrs or sharp edges on sliding partners.
- The adhesion of the coating can be significantly increased by using pretreatments as e.g. sandblasting, phosphating, anodising or oxalating.
- Protect product from frost!

## Typical Properties smartGLEIT LS 818

Test / Feature	Standard/ Parameter	Unit	LS 818	
Appearance (as delivered)	visually	—	grey-black liquid	As Delivered
Density	DIN 51757	g/cm <sup>3</sup>	~ 1.1	
Viscosity	DIN 53211 / 4 mm	s	17 – 27	
Thinner	—	—	water („drinking water quality or demineralised“)	
pH-Value	—	—	7.3 – 8.3	
Available Container Sizes	—	—	25 kg plastic pail	
Usable Life - Closed original container		months	9	
Handling Precautions	—	—	none	Applied
Appearance (Applied)	visually	—	grey-black dry film	
Drying Time			40–60 min @ 20 °C / 68 °F	
Service Temperature	—	°C	-70 to +250 / -94 to 482	
Friction value $\mu$	screw-test		~0.09	
Layer Thickness		$\mu\text{m}$	5 to 20	