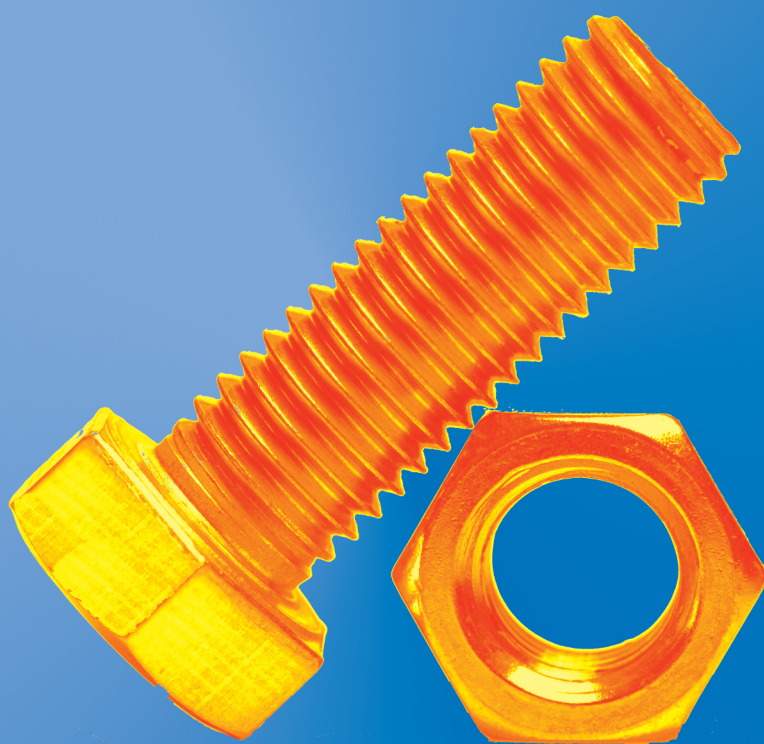


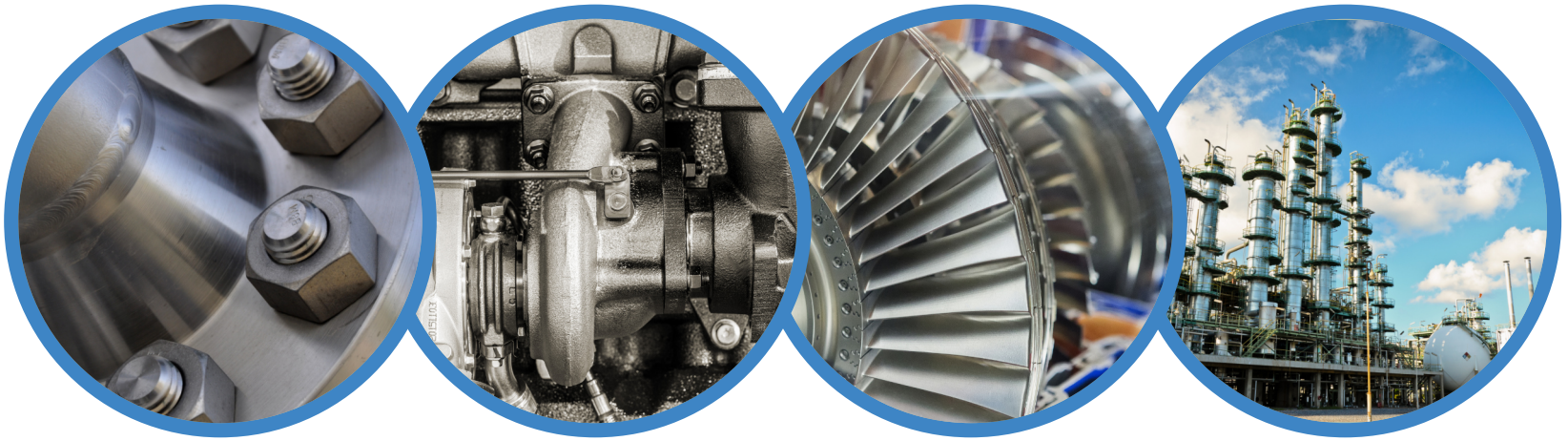
smartGLEIT[®] LS 8042
HIGH TEMPERATURE COATING



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 smartGLEIT[®]
FRICTION MEETS ENGINEERING

THE "NON-GREASE" SCREW PASTE



High Performance and Reliability

Solid film lubricants (or Anti-Friction-Coatings, AFC's) are functional, high performance layer systems, usually based on organic binder systems. Specific formulations allow the adaptation to the particular application.

Typically AFC's are especially suitable for lubrication of slow sliding movements with medium to high surface pressures. In addition, other functions are also integrated, such as, for example, corrosion protection or decorative properties.

AFC's can be used in various stages of production or use:

- Mounting and assembly aid
- Optimization of the running-in process
- Complementary („hybrid“) lubrication (with grease or oil)
- Lifetime lubrication

Due to the wide range of possible applications and good performance, solid film lubricants are an indispensable part of any lubricant portfolio.

Specialized products are necessary for screw connections operating in the high-temperature area – apart from questions concerning the coefficient of friction during assembly, it is particularly important that the connection can be released again after a prolonged period of operation and no negative influences of the lubricant on the metallurgy of the screw material occur.

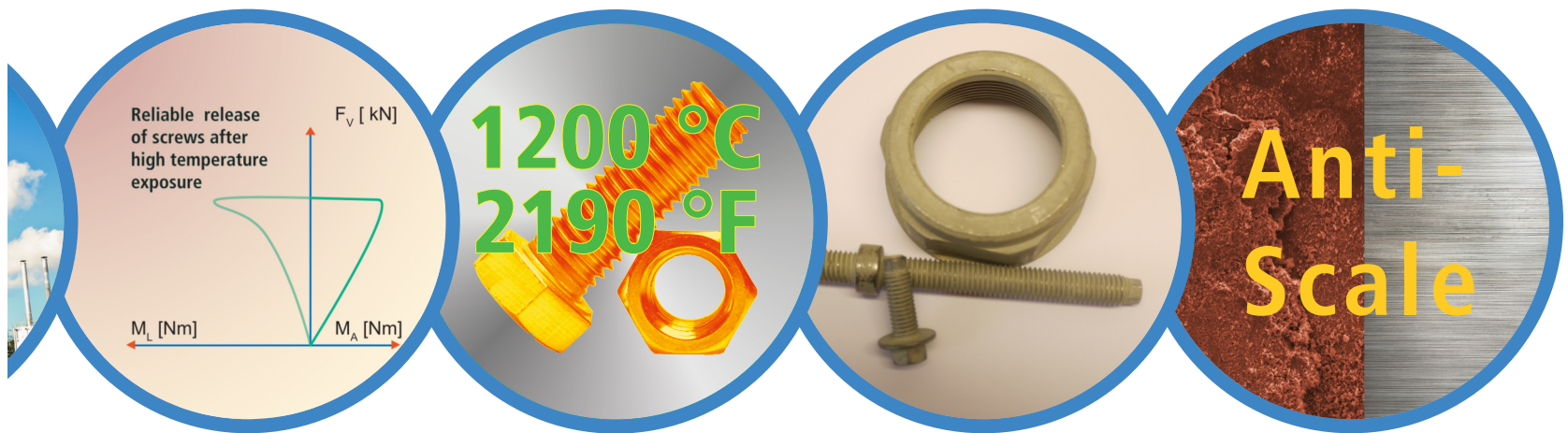
smartGLEIT® LS 8042 is a thermosetting lubricating lacquer with a high temperature resistant solid lubricant combination in an organic binder.

- The high-quality binder system ensures good film formation and adhesion of the embedded solid lubricants on the surface.
- The lubricants are selected and adjusted to each other, ensuring temperature resistance up to +1200 ° C (2190 °F).
- The ingredients of LS 8042 are metallurgically-compatible at high temperatures.
- The track-free, dry solid film lubricant simplifies parts handling and storage.

DRY LUBRICATION AND PROTECTION

UP TO 1200 °C / 2190 °F

DRY FILM = PERFECT FOR AUTOMATED ASSEMBLY



Metallurgically-Compatible and Environmentally Friendly

Features of LS 8042

- Green-grey solid film lubricant
- Wide temperature range up to +1200 °C (2190 °F)
- Very good release properties even after long service times at high temperatures – connections are detachable!
- 8042 protects the surface from oxidation at high temperatures (scale)
- High adhesion level
- Oil and solvent resistant
- Application with commonly used techniques
- The adjustment of the coefficient of friction (CoF) ($\mu = 0,09$ to $0,14$) is done by a top-coating e.g. smartGLEIT DF 977)
The standards VDA 235-203 and VW TL 52501 are met

Application of LS 8042

- LS 8042 is applicable with all common application techniques - the selection of the best method is done on base of the process environment
- The layer must be cured
- Special working instructions are available – Please don't hesitate to ask us

Areas of Application

Generally suited for screws, nuts, washers and bolts used in high temperature applications securing the detachability after operation loads.

Examples:

- For applications used in automotive industries, e.g. connections/threads for exhaust components, turbo-charges, lambda sensors, spark plugs – generally for working temperatures above 500 °C (930 °F)
- Turbine bolts, flange connections in power plants
- Flange connections or thread joints e.g. in chemical plants, refineries or heating systems
- Solid film lubricants are especially beneficial in case of offline application of the lubricant and/or in case a (semi-)automated assembly is planned - this means dry films are generally suitable for serial production

Note:

smartGLEIT® LS 8042 is showing only limited lubricity at temperatures below 300 °C / 570 °F – therefore top-coats are used to set the friction value (e.g. DF 921). Special product variants with lubricity at normal temperatures are available.

TECHNICAL DATA

| CHARACTERISTIC | STANDARD/ PARAMETER | UNIT | LS 8042 |
|---|---|-------------------|-------------------------------|
| Appearance (as delivered) | visually | --- | ochre colored liquid |
| Density | DIN 51757 | g/cm ³ | ~ 1,2 |
| Flashpoint | DIN 51755 | °C | > 25 |
| Dry Residue | --- | % (weight) | 31–37 |
| Viscosity | DIN 53211 @ 5 mm | s | 30–50 |
| Available Packing Size | --- | steel-pail, o.h. | 10 – 20 – 50 kg |
| Safety Instructions | | --- | pls. refer to SDS |
| Thinner | --- | --- | TC 88 NE |
| Shelf Life in Closed Original Container | | months | 6 (after delivery) |
| Appearance (applied) | --- | --- | ochre colored dry film |
| Operating Temperature | --- | °C | -70 to +1200 / -94 to 2190 °F |
| Layer Thickness | --- | µm | 5–20 |
| Drying & Curing | @ 250 °C / 480 °F @ 220 °C / 430 °F @ 200 °C / 390 °F | min | >5 > 40 > 120 |
| Friction Value μ_{total} | screw-test; 1.49xx | --- | 0,09–0,14 (with Top-Coat) |

The information given and the recommendations made herein reflects our current knowledge and can only provide a first overview in this brochure. The given values are not eligible for creating specifications. We reserve the right to make changes based on technical developments or changes in legislation. Due to the wide range of possible applications and operating conditions, the product information can only be indicative of possible applications. Therefore, no binding liability and warranty claims can be derived. In any case we strongly recommend to carry out tests before use and thus determine if the product is meeting all requirements and expectations.

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