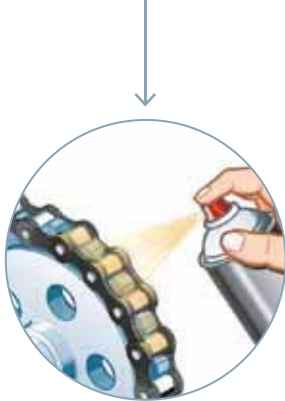
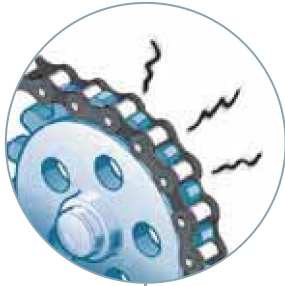


Lubrication

Lubrication and Protection



Why Use a LOCTITE lubricant?

LOCTITE lubricants offer superior protection for industrial plants and equipment. The range includes organic, mineral and synthetic based products meeting the requirements of industrial applications.

What is the function of a lubricant?

The typical function of a lubricant is to protect against friction and wear. Lubricants are also used to protect against corrosion by displacing moisture and leaving a continuous coating on the part.

What considerations are important when choosing a lubricant?

When choosing a lubricant, it is important to consider the intended application as well as the environmental conditions to which the assembly will be exposed. Environmental conditions are critical to the successful selection of the right lubricant product. Factors including high temperature, harsh chemicals and contaminants may have an adverse effect on the expected lubricant performance.

LOCTITE anti-seize products

LOCTITE anti-seize products provide protection in harsh environments and operating conditions, e.g. extreme temperatures and corrosive attack. They prevent fretting and galvanic corrosion. They can also be used as a running in lubricant for new equipment.



LOCTITE greases

LOCTITE lubricating greases have been designed to offer the following performance benefits:

- Protect against friction
- Reduce wear and corrosion
- Prevent overheating

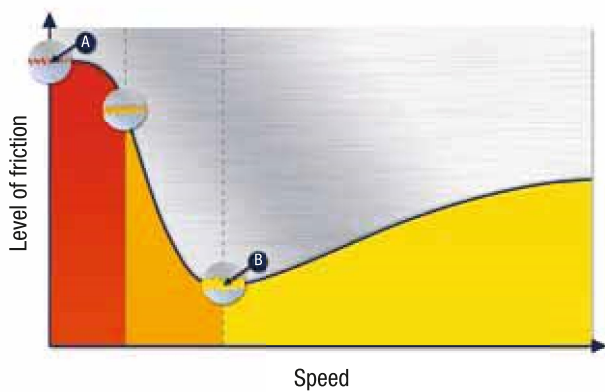
To match specific requirements, LOCTITE greases are made of mineral or synthetic base oils combined with a thickening agent, e.g. lithium soap or inorganic material such as silica gel.



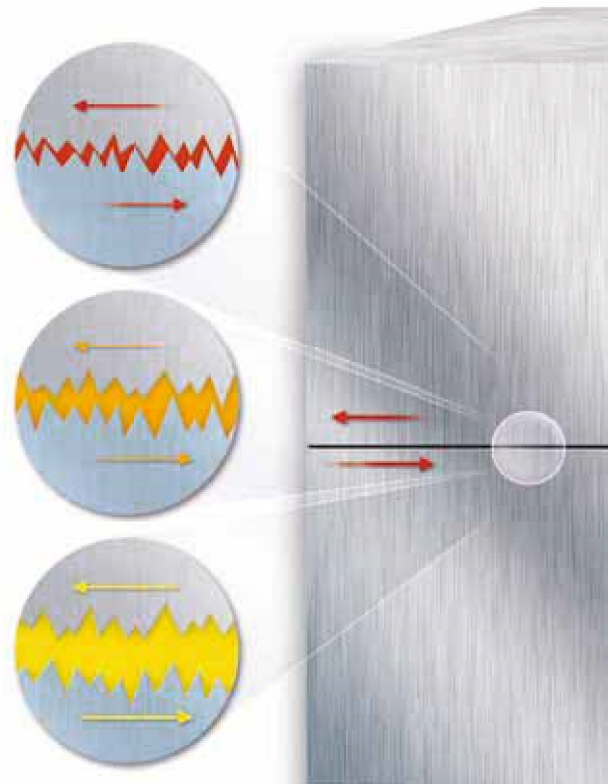
Application areas of oils, greases and anti-seizes

A lubricant needs to be chosen based on the speed, temperature and boundary friction encountered in the application concerned.

	Oils and Greases	Anti-Seizes
Speed of movement	Medium to high	Low to zero
Temperature	Up to 250°C	Up to 1,300°C
Load	Low to medium	High



- Anti-seize (boundary friction)
- Grease (mixed friction)
- Oil (fluid friction)
- A Starting friction
- B Translation speed to fluid friction



LOCTITE oils

LOCTITE lubricating oils have been designed for moving parts in equipment ranging from major plants to mini machines. Flowability and surface adhesion ensure good lubrication at both high and low speeds within the specified temperature range.







LOCTITE dry film lubricants

MoS₂ and PTFE based LOCTITE dry film lubricants reduce friction, prevent seizing, ensure protection against corrosion and enhance the performance of oils and greases.






Dry Films and Oils

Product Table

Solution	Dry film lubricant			
	General purpose	Non-metal surface	Penetrating oil	Chain lubricant
	LOCTITE LB 8191	LOCTITE LB 8192	LOCTITE LB 8001	LOCTITE LB 8011
				
Appearance	Black	White	Colourless	Yellow
Base	MoS ₂	PTFE	Mineral oil	Synthetic oil
Viscosity	11 s (Cup 4)	11 s (Cup 4)	4 cSt	11.5 cSt
Service temperature range	-40°C to +340°C	-180°C to +260°C	-20°C to +120°C	-20°C to +250°C
Load test 4 ball N (weld load)	–	–	1,200	2,450
Pack sizes	400ml aerosol	Not available in the U.K.	Not available in the U.K.	Not available in the U.K.
	LOCTITE LB 8191 <ul style="list-style-type: none"> MoS₂ anti-friction coating – aerosol Quick drying Surface protection against corrosion Enhances the performance of oils and greases 	LOCTITE LB 8192 <ul style="list-style-type: none"> PTFE coating For non-metal and metal surfaces Creates sliding surface for free movement Prevents dust/dirt accumulation Protection against corrosion For conveyor belts, slideways and cams H2 NSF Reg. No.: 122980	LOCTITE LB 8001 <ul style="list-style-type: none"> Penetrating mineral oil spray Multi-purpose penetrating oil for micro-mechanisms Penetrates inaccessible mechanisms Lubricates valve seats, collars, chains, hinges and cutting blades H1 NSF Reg. No.: 122999	LOCTITE LB 8011 <ul style="list-style-type: none"> High-temperature chain oil spray Oxidation resistance prolongs lubricant service life Lubricates open mechanisms, conveyors and chains at elevated temperatures up to 250°C H2 NSF Reg. No.: 122978

Oil

Silicone oil	Cutting oil	All-round cutting fluid	General purpose	Special purpose
LOCTITE LB 8021	LOCTITE LB 8030/8031	LOCTITE LB 8035	LOCTITE LB 8201	LOCTITE LB LM416
				
Colourless	Dark yellow	Brownish liquid	Light yellow	Green
Silicone oil	Mineral oil	Emulsifier	Mineral oil	Mineral oil
350 mPa·s	170 cSt	Low	17.5 cSt (+50°C)	—
-30°C to +150°C	-20°C to +160°C	—	-20°C to +120°C	-10°C to +60°C
—	8,000	—	—	—
Not available in U.K.	Not available in the U.K.	5 ltr / 20 ltr bucket	400ml aerosol	400ml aerosol, 4kg pail
LOCTITE LB 8021 <ul style="list-style-type: none"> • Silicone oil • Lubricates metal and non-metal surfaces • Suitable as release agent H1 NSF Reg. No.: 141642	LOCTITE LB 8030 bottle LOCTITE LB 8031 aerosol <ul style="list-style-type: none"> • Cutting oil • Protects cutting tools in operation • Improves surface finish • Increases tool life • For drilling, sawing or tapping steel, stainless steel and most non-ferrous metals 	LOCTITE LB 8035 <ul style="list-style-type: none"> • Water-miscible and bactericide-free • With patented emulsifier system • Very good corrosion protection and high process economy • For drilling, turning, sawing, milling, threading, grinding • Suitable for a broad range of materials: steel, high-alloy steel, cast iron and non-ferrous metals, including brass and aluminium alloys 	LOCTITE LB 8201 <ul style="list-style-type: none"> • Five-way spray • Frees assemblies • Lubricates metal • Cleans parts • Displaces moisture • Prevents corrosion 	LOCTITE LB LM 416 <ul style="list-style-type: none"> • Biodegradable track lubricant • Superior corrosion protection • Applicable in any season • Long intervals between applications • Mainly used for slide chair lubrication Approved by Network Rail, UK