

Thickener/Soap type

The thickener or soap type is the system which holds the oil and / or the additives together to enable the lubricating grease to function. The thickener system is formed from either soaps or non-soaps.

Soaps are based on lithium, aluminium, calcium, barium or sodium. Non-soaps are based on organic or non-organic solids, polyurea, bentonite clay, silica gel, phthalocyanines, PTFE, graphite etc...

Please note that metal soaps can also be a complex or a mixed base e.g. lithium complex or lithium-calcium soap. The type of thickener gives the grease its typical characteristics, it constitutes 5 to 30% of a greases composition.

Compatibility chart for thickener types

| | Lithium soap | Calcium soap | Sodium (NA) soap | Lithium complex | Calcium complex | Sodium complex | Barium complex | Aluminium complex | Clay | Polyurea |
|-------------------|--------------|--------------|------------------|-----------------|-----------------|----------------|----------------|-------------------|------|----------|
| Lithium soap | + | o | - | + | - | o | o | - | o | o |
| Calcium soap | o | + | o | + | - | o | o | - | o | o |
| Sodium (NA) soap | - | o | + | o | o | + | + | - | o | o |
| Lithium complex | + | + | o | + | + | o | o | + | - | - |
| Calcium complex | - | - | o | + | + | o | - | o | o | + |
| Sodium complex | o | o | + | o | o | + | + | - | - | o |
| Barium complex | o | o | + | o | - | + | + | + | o | o |
| Aluminium complex | - | - | - | + | o | - | + | + | - | o |
| Clay | o | o | o | - | o | - | o | - | + | o |
| Polyurea | o | o | o | - | + | o | o | o | o | + |

+ = Compatible - = Incompatible o = Limited

