



UEIL position paper on Minimum storage period/Shelf life

Disclaimer: This position paper summarizes the views of the Union of the European Lubricants Industry (UEIL) and is provided for information purposes only but it has no legal value.

Recommendations and differentiation

Content:

- Scope of application
- Storage conditions
- Products
- Exclusions

The minimum storage period of lubricants depends on numerous influencing factors and can therefore not be determined in a blanket approach. The most important criteria are referred to in the following document. However, the time periods given can only be recommendations based on "best practice"; only the manufacturers can provide specific information for their respective products.

Scope of application

The recommendations apply to commercially available lubricants, which can be classified in the following categories:

- Lubricating oils
- Greases
- Lubricants for metalworking

This includes products for use in the automotive and motor sectors as well as industrial lubricants. For the latter, a distinction must be made between "conventional" lubricants (based on mineral oils and synthetic oils), biodegradable products and food-grade products.

Storage conditions

The prerequisite for achieving an optimal shelf life is compliance with the recommended storage conditions:

UEIL asbl



- Only sealed original containers
- Upright storage for cans and small containers
- Horizontal storage for drums
- Covered, dry storage
- No strong temperature fluctuations (recommended range: 15 - 25°C)
- No exposure to sunlight or heat
- Vibration-free (especially for greases)
- Frost-free - generally recommended, but essential for water-based fluids as well as for water-mixed liquids or concentrates intended for this purpose

Products

Lubricating oils

Lubricating oils based on mineral oils and synthetic base oils generally have a minimum storage period of approx. 3 years if the recommendations for storage are observed. In the case of lubricants for use in car engines and transmissions, it should be noted that for long storage, the API or ACEA specifications may be replaced by more recent editions in the meantime, so the scope of application may be limited due to changes in standards.

Biodegradable products naturally have a significantly shorter minimum storage period, which also depends mainly on the components used (base oil, additives, ...). A blanket statement is difficult.

Separate rules apply to food-grade lubricants.

Water-based hydraulic lubricants

In addition to the general rules, the instructions for frost-free storage apply here. Due to the composition, significantly shorter minimum storage periods generally apply to this type of product, in opposition to conventional lubricants or fluids.

Fats

In the case of greases, there are other aspects that adversely affect the minimum storage period. In addition to the base oils used, the thickener types used also play a decisive role. The consistency of the grease (NLGI class) also has a significant influence, especially in the case of low NLGI classes and in the case of large packaging sizes (barrels) when the grease is under its own weight.

In case of oil bleeding from the grease, it should be noted that no attempt should be made to remix the oil.

UEIL asbl



Lubricants for metalworking

A distinction must be made between oils and water-miscible machining lubricants.

Oils can generally be stored for approx. 2 years if stored properly.

Concentrates for water-miscible machining fluids have a much shorter shelf life, usually between 6 and 12 months. The storage period also depends on the composition. Occasionally, components settle to the bottom (e.g. defoamers). In the case of concentrates pre-preserved with biocides, it should be noted that biocides decompose over time and emulsions from older concentrates may not be sufficiently protected against germ infestation, so that post-preservation is necessary. In particular, they must be strictly protected from low temperatures and strong temperature fluctuations; frost must be avoided under all circumstances.

Specific information from the respective manufacturers can be found in the safety data sheet or technical recommendations or can be obtained directly from the manufacturer.

Exclusions

Opened packages as well as refilled goods are excluded from guarantees regarding the minimum storage period. Statements on components filled with lubricants (such as bearings, gears, etc.) can only be made in direct consultation between the lubricant supplier and the user. In such a case, interactions with other substances adhering to the components (e.g. corrosion protection) must also be taken into account.

August, 2021