Technical Data Sheet

Polytac

Proprietary additive blend of high molecular weight polyisobutenes and base oils

Product features and benefits

- Efficient additive for mineral oil based lubricants
- Pale to medium yellow clear product
- Low treat rate for achieving optimum tackiness
- Low viscosity facilitating easy handling
- Dissolves easily and quickly in mineral oil lubricant formulations
- Superior clingability and stringiness properties

Typical applications

- Wire rope and chain lubricants
- Rust preventives
- Chainsaw lubricants
- Slideway lubricants
- Rock drilling oils
- Rail curve greases
- Greases
- Sealants
- Anti-misting agent for neat metal working fluids

Typical treat rate

Polytac can be added in a broad treat rate, typically 0,25 % to 1,0 %

Typical properties and values

Property	Unit	Typical value
Appearance		Pale to medium yellow liquid
Viscosity @ 100°C	cP	2000
Density @ 15°C	g/cm^3	900
Flash point	°C	Minimum 170
Shelf life		Minimum 2 years

Solubility

Polytac is soluble in paraffinic and naphthenic oils, PAOs, PIBs and some esters including and di-tridecyl adipate (DTDA) and trimellitates.

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Technical performance

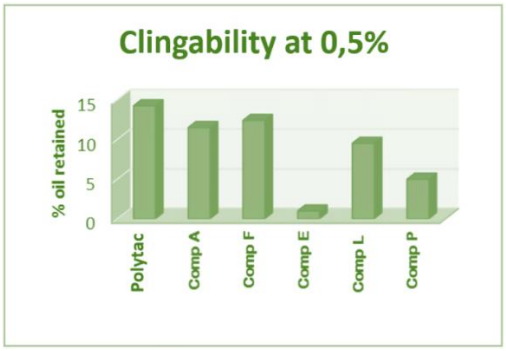
Internal test procedures have been developed to demonstrate the effectiveness of the Polytac additive compared to 5 similar commercially available competitor additive products.

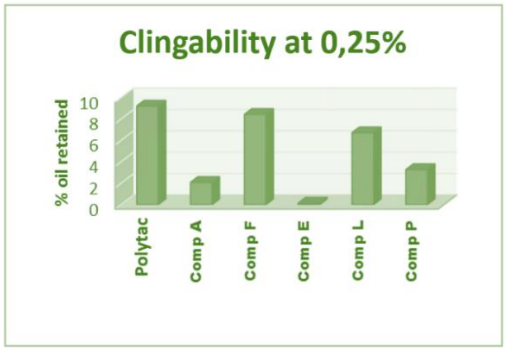
1. Clingability test

Summary of test procedure: A test solution of the additive in mineral oil is prepared, with the test solution at 20°C. A Brookfield Viscometer No 1 spindle is carefully lowered in the test solution to a standard depth. After 2 minutes, the spindle is carefully removed and rotated at 400 rpm for 10 minutes. The weight of the lubricant remaining on the spindle is carefully determined.

Parameter measured: Effectiveness of the tacky additive is measured by calculating the percentage extra oil clinging to the spindle compared with the blank oil.

Results



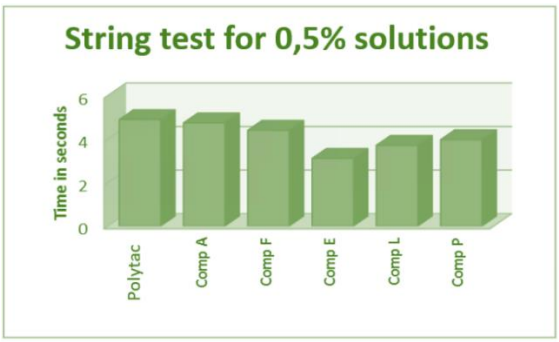


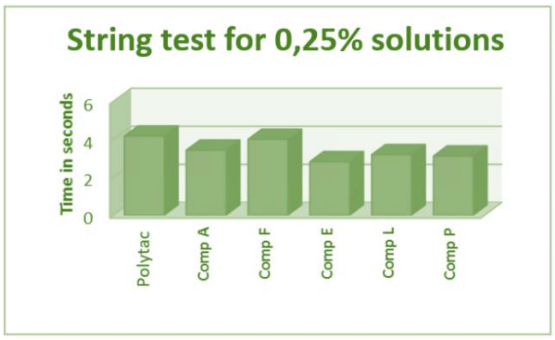
2. String test

Test procedure: It is known that one of the features of a tacky additive is the stringiness of the product. This is often performed 'by feel' of the experienced oil technologist. A test has been developed to provide an objective visual approximation of this property. A test solution of the additive in mineral oil is prepared. A Brookfield Viscometer No 1 spindle is suspended by a retort stand so that the base of the spindle is 26 cm from the base of the retort stand. The test solution is raised to the spindle such that the spindle is immersed by approximately 1 cm. The test solution is then carefully lowered to the base of the retort stand.

Parameter measured: The time measured in seconds for the first break in the lubricant string to occur.

Results





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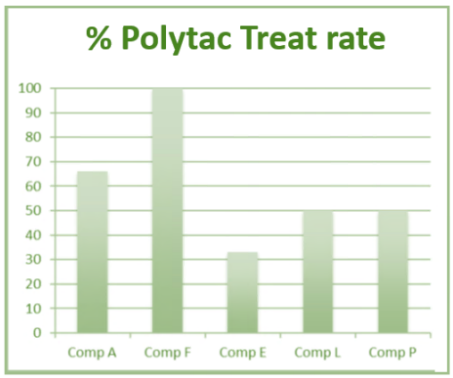
Recommended relative treat rate

Based upon the above sets of results, it should be possible to formulate lubricants with Polytac using a lower treat compared to 5 similar commercially available competitor additive products. The following table reports the relative treat rate that could be used for Polytac versus the various competitive grades.



Before using this product, the user is advised and cautioned to make its own determination and assessment of the safety and suitability of the product for the specific use in question and is further advised against relying on the information contained herein as it may relate to any specific use or application. It is the ultimate responsibility of the user to ensure that the product is suitable, and the information is applicable to the user's specific application.

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