

MAPLUB® PF 101-b



Licence n° 80354

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Coating characteristics

Composition	Very low outgassing PFPE oil (PerFluoroPolyEther) PTFE & MoS ₂ particles (PolyTetraFluoroEthylene & Molybdenum Disulfide)
Worked penetration ¼ cone, 60 strokes (NFT 60 140)	311. 10 ⁻⁴ m
Unworked penetration ¼ cone (NFT 60 140)	302. 10 ⁻⁴ m
NLGI Grade (consistency) (ASTM D217)	1
Density @ 20°C	1.95 g/ml
Apparent viscosity @ 20°C & 10 s-1 (cone/plate - Set speed)	44 Pa.s ± 7Pa.s
Apparent viscosity @ 20°C & 100 s-1 (cone/plate - Set speed)	8.3 Pa.s ± 2Pa.s
Base oil viscosity index	355
Limiting temperatures in constant use	-60°C / +130°C
Limiting temperatures in occasional use	+250°C
Base oil pour point	-67°C
Oil separation (FTMS 321-3)	4.7 % mass
Evaporation loss (ASTM D972)	1.1 % mass
Outgassing* (ECSS Q 70-02A)	TML = < 1% RML = < 1% CVCM = < 0.1%
Limit working pressure	10 ⁻¹⁰ Torr @ 100°C

* INTA measuring report ESE/RPT/4316/009/INTA/06

Definition

Grease for very wide working temperature range applications under ultra vacuum.

Aspect: dark grey

Purpose: MAPLUB PF 101-b grease has been specially formulated to meet specifications for satellite mechanisms exposed to wide temperature variations. Thus :

Its low consistency leads to relatively low resistant torques, especially at low temperatures. MoS₂ particles protect surfaces during highly stressed contacts (significant sliding or boundary regimes).

When mechanically stressed, the chemical reactivity of its base oil with metallic materials may lead to the polymerization of the product and generate a friction increase. To determine potential lifetime, it is therefore recommended to carry out endurance tests that are representative of the application. However, the use of non metallic coatings on the moving parts may considerably reduce this phenomenon.

This grease is quite suitable for space use, on any type of material (metal, ceramic, plastic, etc.) and on such various components as: ball and journal bearings, gears, Harmonic Drive or Cyclo gear boxes, roller and ball screws, sliding systems.

Due to its low evaporation rate, it can be used in specific applications such as: vacuum equipment, (vacuum pumps, etc.), electronics (components manufacturing) & electrotechnics (connections), scientific instrumentation (particles rings, etc.), the automotive industry, aeronautics, nuclear power systems, robots for clean rooms.

Packaging

50 ml, 100 ml & 250 ml

Storage

In original unopened packaging in a dry, cool and dark area. Normal exudation (bleeding) of the grease may occur after a few weeks storage. Therefore, it is recommended to homogenize the grease in its can with a clean metallic spatula before use.

Safety data

Precautions ➤ This product is not flammable. This preparation is not classified as a health hazard according to 1999/45/CE directive.

Labelling ➤ This preparation was classified in compliance with the directives in effect.

Transport ➤ Please refer to our latest safety datasheet.