

Product Information

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TITAN FRICOFIN LL

Premium Performance coolant concentrate based on monoethylene glycol. Free of nitrites, amines, borates, silicates and phosphates with OAT technology.

Description

TITAN FRICOFIN LL is an antifreeze coolant concentrate based on monoethylene glycol and is used for engines in Heavy Duty vehicles, passenger cars and stationary engines. As OAT coolant concentrate it provides a stable inhibitor system based on organic acids for maximum drain intervals. TITAN FRICOFIN LL is free of nitrites, amines, borates, silicates, and phosphates.

Application

Suitable for use in various internal combustion engines and also suitable to use for indirect cooling of Hybrid and Battery Electric Vehicles (BEVs) in automotive and heavy-duty applications if there is no requirement on electrical conductivity. TITAN FRICOFIN LL is miscible with coolants approved as per VW TL 774-C (G11), TL 774-F (G12+), 774-G (G12++) and 774-J (G13), however, to achieve a full performance a complete change is recommended. Always observe the manufacturers recommendations when mixing with other coolants.

TITAN FRICOFIN LL is a coolant concentrate and must be diluted with water before it is filled into the cooling system. The concentration rate should be between 33% to 60% by volume, typically 50%. The properties of the water should not exceed the following limits:

Water hardness: 0 - 20 °dH (0-3.6 mmol/l)
Chloride content: 100 ppm max.
Sulphate content: 100 ppm max.

By adding distilled or deionized water these values can be easily adjusted, if necessary. Manufacturers' drain intervals and recommendations about the concentration are mandatory. As with all coolants, even with TITAN FRICOFIN LL, the use of galvanized components in cooling circuits and as a part of storage or mixing installation (e.g. for pipes) should be avoided.

For information on product safety and proper disposal please refer to the latest Material Safety Data Sheet.

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Advantages

- Excellent long-lasting protection against deposits, cavitation and corrosion in engines and coolers.
- Superior protection against freezing and overheating.
- Successfully tested for Heavy Duty applications without requiring an initial filling of Supplement Coolant Additive (SCA).
- Greatly reduces the risk of deposits.
- Compatible with seals, plastics and non-ferrous metals.
- Contains bittering agent to prevent swallowing.
- Longest drain intervals possible.

Specifications

- ASTM D 3306 TYPE I
- ASTM D 6210 TYPE I-FF
- BS 6580:2010
- SAE J814
- FORD WSS-M97B44-D
- JAGUAR LAND ROVER STJLR.651.5003
- FVV Heft R443
- KSM 2142
- UNE 26-361-88/1

Approvals

- CAT / MWM TR 0199-99-2091
- DAF 74002
- DEUTZ DQC CB-14
- DTFR 29D110 (MB 326.3)
- MAN 324 TYPE SNF
- MTU MTL 5048

FUCHS Recommendations

- AFNOR NFR 15-601 TYPE I
- AS/NZS 2108:2004 TYPE A
- ASTM D 4985
- SAE J1034
- ADE (ATLANTIS DIESEL ENGINES)
- BAIC GROUP FOTON Q-FPT 2313005-2013
- Bergen Engines 2.13.01
- Bez.Reg.Arnsbg. E62.12.22.64-2011-1
- CATERPILLAR MAK A4.05.09.01
- CHRYSLER MS 12106
- CNH MAT 3624
- CNH MAT 3724
- CUMMINS (ISBe engines at DAF and Leyland)
- CUMMINS CES 14603, CES 14439
- DETROIT DIESEL 93K217
- FIAT 9.55523
- GM GMW 3420 (6277M)/GME L 1301
- HYUNDAI MS 591-08
- JASO M325
- JIS K2234
- JOHN DEERE JDM H5
- KOMATSU AF-NAC (07.892 (2009))
- LIEBHERR MD 1-36-130
- MACK 014 GS 17009
- MAZDA MEZ MN 121 D
- PSA B 71 5110
- RENAULT 41-01-001/- -S Type D
- SAAB B 040 1065
- SKODA 61-0-0257
- VOLVO COOLANT VCS (STD 418-0001)
- VOLVO COOLANT XLC (STD 418-0005)
- VW TL 774-D/F (G12+ / different colour)

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TYPICAL CHARACTERISTICS

| | | |
|---|------------|------------------------|
| Density at 20°C | DIN 51757 | 1.113 g/ml |
| Boiling Point | ASTM D1120 | > 160 °C |
| pH-value | DIN 51369 | 8.6 |
| Product Dyeing | DIN 10964 | orange |
| Mixing Ratio TITAN FRICOFIN LL : H ₂ O | | Frost Protection min.: |
| | 1:1 (50%) | -40 °C / -40 °F |
| | 2:3 (40%) | -28 °C / -18.4 °F |
| | 1:2 (33%) | -21 °C / -5.8 °F |

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Notes

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS (UK) plc in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally valid statements about the function of our products are not possible.

Our products must not be used in aircraft or spacecraft. Our products may be used in manufacture of components for aircraft or spacecraft if they are removed without residue from the components prior to assembly into the aircraft or spacecraft.

The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application. We therefore recommend that you consult a FUCHS LUBRICANTS (UK) plc application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS (UK) plc.

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