

MAINTAIN

Antifreeze, Brake Fluids and Service Products



Around the clock reliability – at any temperature

The FUCHS MAINTAIN range of workshop and service products is a comprehensive portfolio of coolants, brake fluids and fuel additives.

These offer your vehicle optimum protection at all times.

Our MAINTAIN products match with nearly every vehicle type and offer the best possible protection together with the latest technology.



Antifreeze.

For reliable protection at any time of the year

Antifreeze must meet many requirements, as an average of around 150 liters of coolant are pumped through the cooling circuit of a typical passenger vehicle every minute. One third of the heat generated during combustion is dissipated into the atmosphere via the coolant. The coolant itself passes over more than 100 different materials and must be compatible with all of these.



MAINTAIN Product Range

Only premium products like the MAINTAIN FRICOFIN range offer certified safety and are capable of fulfilling all tasks and requirements expected of modern antifreeze, such as:

- **Antifreeze**, i.e. reliable prevention of liquids freezing, even at extremely low temperatures.
- **Protection from soiling/deposits** to keep the entire cooling circuit working properly in the long term.
- **Protection from overheating**, for example if sufficient heat dissipation is no longer guaranteed due to soiling deposits.
- **Protection from aging and oxidation**, so that the protective effect of the coolant remains intact throughout the entire duration of the respective service interval.

Particularly important:

- **Corrosion protection** to reliably eliminate the risk of damage to any metallic materials in the cooling circuit, such as cast iron, cast aluminium, steel and brass. Without proper coolant, the cooling system provides ideal conditions for corrosion thanks to its high temperatures and large volume of water. Deep rust spots/pitting can occur in the metal, potentially causing the coolant pump or the entire cooling system to fail. This can ultimately lead to extremely costly engine damage. The MAINTAIN FRICOFIN range of coolants reliably prevents corrosion. The key components here are so-called corrosion inhibitors. They bond with the metals in the cooling system and form a wafer thin, yet extremely strong protective layer on their surface.



MAINTAIN FRICOFIN LL

Alternative Product to PENTOFROST SF

Premium Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine, phosphate and silicates.

Product dyeing: orange

Specifications

ASTM D 3306 TYPE I
ASTM D 6210 TYPE I-FF
BS 6580:2010
SAE J814
FORD WSS-M97-B44-D
JAGUAR LAND ROVER
STJLR.651.5003
FVV Heft R443
KSM 2142
UNE 26-361-88/1

Approvals

Bez. Reg. Arnsbg. E62.12.22.64-2011-1
CAT / MWM TR 0199-99-2091
DAF 74002
DEUTZ DQC CB-14
MAN 324 TYPE SNF
MB-APPROVAL 325.3
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

CATERPILLAR MAK A4.05.09.01
CHRYSLER MS 12106
CNH MAT 3624
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
BERGEN ENGINES 2.13.01
SAAB B 040 1065
SKODA 61-0-0257
TOYOTA TSK 2601G-8A
VW TL 774-D/F (G12+/different colour)
VOLVO COOLANT VCS (STD 418-0001)

MAINTAIN FRICOFIN V

Alternative Product to PENTOFROST E

Ultra High Performance Coolant Additive based on monoethylene glycol. Free of nitrites, amines and phosphates.

Product dyeing: pink-violet

Specifications

ASTM D 3306 TYPE V
BS 6580:2010

Approvals

VW TL 774 J (G13)

FUCHS Recommendations

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MAINTAIN FRICOFIN DP

Ultra High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate.

Product dyeing: **pink-violet**

Specifications

AFNOR NF R 15-601 TYPE 1
AS/NZS 2108:2004 TYPE A
ASTM D 3306 TYPE I
ASTM D 4985
BS 6580:2010
SAE J814
CUMMINS CES 14603

FUCHS Recommendations

DETROIT DIESEL 93K217
SCANIA TB 1451
VW TL 774-G (G12++)

Approvals

DEUTZ DQC CC-14
MAN 324 TYPE Si-OAT
MB-APPROVAL 325.5
MB-APPROVAL 325.6

MAINTAIN FRICOFIN DP 50

Formerly MAINTAIN FRICOFIN DP-35

Ultra High Performance Coolant Ready-Mix based on monoethylene glycol. Offers frost protection down to -35 °C. Free from nitrite, amine and phosphate.

Product dyeing: **pink-violet**

Specifications

AFNOR NF R 15-601 TYPE 3
ASTM D 3306 TYPE III
ASTM D 4985
BS 6580:2010
SAE J814
CUMMINS CES 14603

FUCHS Recommendations

DETROIT DIESEL 93K217
MAN 324 TYPE Si-OAT
SCANIA TB 1451

Approvals

DEUTZ DQC CC-14
MB-APPROVAL 326.5
MB-APPROVAL 326.6
VW TL 774-G (G12++)



MAINTAIN FRICOFIN HDD

Ultra High Performance Engine Coolant concentrate based on monoethylene glycol. Free of amines and phosphates with low silicate technology.

Product dyeing: yellow

Specifications

ASTM D 3306 TYPE I
ASTM D 4985
ASTM D 6210 TYPE I-FF
ASTM D 7583
AS/NZS 2108:2004 TYPE A
BS 6580:2010
SAE J814
CHRYSLER MS 7170
CHRYSLER MS 9769
DETROIT DIESEL 7SE298
FORD ESE-M97B44-A
FORD ESE-M97B18-C
FORD WSS M97B51-A1
GM 1825M & GM 1899M
JIS K2234
MACK 014GS17004

Approvals

MTU MTL 5048

FUCHS Recommendations

CASE MS 1710
CAT EC-1
CUMMINS CES 14603
DETROIT DIESEL 93K217 (NOAT)
FREIGHTLINER 48-2288D
IVECO 18-1830
KENWORTH RO26-170-97
MAN 324 TYPE N
NEW HOLLAND WSN-M97B18-D
PACCAR CS 0185
TOYOTA Motor Corp. RP 329

MAINTAIN FRICOFIN

Super High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate.

Product dyeing: blue-green

Specifications

AFNOR NF R 15-601 TYPE 1
ASTM D 3306 TYPE I
ASTM D 4985
BS 6580:2010
CUNA NC 956-16
SAE J814
SAE J1034

Approvals

BMW GS 94000
(BMW N 600 69.0)
CAT/MWM TR 0199-99-2091
DEUTZ DQC CA-14
GE JENBACHER TA 1000-0201

MAN 324 TYPE NF
MAN 324 TYPE NF PRITARDER
MB-APPROVAL 325.0
MTU MTL 5048
PN-C 40007:2000
VOITH TURBO 172.00225010

FUCHS Recommendations

DAF 74001
LIEBHERR TLV 035/TLV 23009 A
OPEL/GM B 040 0240
VW TL 774-C (G 11)



MAINTAIN FRICOFIN 50

Formerly MAINTAIN FRICOFIN -35

Super High Performance Coolant Ready-Mix based on monoethylene glycol. Offers frost protection down to -35 °C. Free from nitrite, amine and phosphate.

Product dyeing: blue-green

Specifications

AFNOR NF R 15-601 TYPE 3
ASTM D 3306 TYPE III
ASTM D 4985
BS 6580:2010
SAE J814

Approvals

DEUTZ DQC CA-14
MB-APPROVAL 326.0

FUCHS Recommendations

BMW GS 94000 (BMW N 600 69.0)
DAF 74001
JENBACHER TA 1000-0201
LIEBHERR TLV 035/TLV 23009 A
MAN 324 TYPE NF
MAN 324 TYPE NF PRITARDER
MTU MTL 5048
CAT/MWM TR 0199-99-2091
OPEL/GM B 040 0240
PN-C 40007:2000
VOITH TURBO 172.00225010
VW TL 774-C (G11)

MAINTAIN FRICOFIN S

High Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine and phosphate.

Product dyeing: light green

Specifications

ASTM D 3306 TYPE I
BS 6580:2010

Approvals

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FUCHS Recommendations

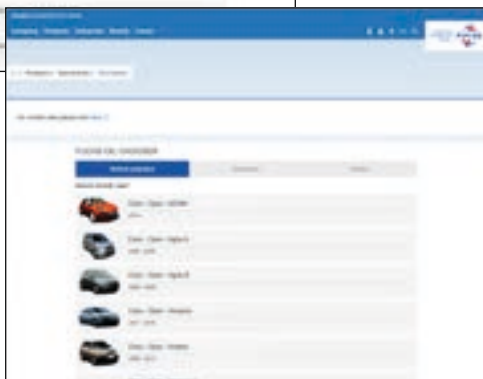
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Find the right antifreeze for your vehicle with the online Oil Chooser from FUCHS

It could hardly be easier

Simply navigate to www.fuchs.com/de and then click on the "Oil Chooser" menu item. Choose your vehicle type (for example passenger car) and select the appropriate make and model. A window then appears with an overview of the optimum lubricants to your vehicle. All you have to do now is to click on the appropriate application (in this case: "cooling system") and the required product for your vehicle will be shown.







Brake fluids. Safe and reliable in every situation

Brake fluids are special hydraulic fluids that are used to transfer the pedal force applied during braking to the brake cylinder.

These important liquids must meet strict requirements:

- **High dry boiling point:** The dry boiling point describes the boiling point of a sealed new brake fluid. A high dry boiling point ensures safety in extreme conditions such as the kinds of very high temperatures that can occur when driving down steep hills.
Dry boiling point according to DOT specification:
DOT 4: 230°C and DOT 5.1: 260°C.
- **High wet boiling point:** The wet boiling point describes the boiling point of a brake fluid at the end of its lifecycle. A high wet boiling point leads to a lower decrease of the boiling point through water absorption.
Wet boiling point according to DOT specification:
DOT 4: 170°C and DOT 5.1: 180°C.
- **Optimum corrosion protection for the system.**
- **Extensive compatibility with all materials used in the braking system,** such as plastics, rubber or metals.

The FUCHS MAINTAIN DOT 4 HT, 4 LV and DOT 5.1 brake fluids are high performance fluids that fulfill or exceed all requirements.

Always have your brake fluid checked every 2 years and replaced as necessary. After all, safety is the top priority.



MAINTAIN DOT 4 LV

Formerly **PENTOSIN DOT 4 LV**

Premium Performance Brake Fluid for hydraulic brake systems and clutch actuation in passenger cars, trucks and motorcycles.

Specifications

FMVSS NR. 116 DOT 3 / 4
ISO 4925 CLASS 3 / 4 / 6
JIS K2233 CLASS 3 / 4 / 6
SAE J 1703 / 1704

FUCHS Recommendations

BMW QV 34001
FORD M6C65-A2
GM Europa GMW 3356
PSA S71 2114
VW 501 14 (TL 766-Z)

Approvals

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MAINTAIN DOT 5.1

Alternative Product to **PENTOSIN SUPER DOT 5.1**, **PENTOSIN SUPER DOT 4**, **PENTOSIN SUPER DOT 4 PLUS** and **PENTOSIN RACING BRAKE FLUID**

Ultra High Performance Brake Fluid for hydraulic brake systems and clutch actuation in passenger cars, trucks and motorcycles.

Specifications

FMVSS NR. 116 DOT 5.1
ISO 4925 CLASS 3/4/5-1
JIS K2233 CLASS 3/4/5
SAE J 1703/J 1704

Approvals

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FUCHS Recommendations

MB 331.0VW TL 766-Y

MAINTAIN DOT 4 HT

Super High Performance Brake Fluid for hydraulic brake systems and clutch actuation in passenger cars, trucks and motorcycles.

Specifications

FMVSS NR. 116 DOT 3/DOT 4
ISO 4925 CLASS 3/4
JIS K2233 CLASS 3/4
SAE J1703/J1704

FUCHS Recommendations

FORD M6C62-A
FORD M6C9103-A
NH 800 A
OPEL 19 42 421
VW TL 766-X

Approvals

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Fuel additive. Gets any diesel engine ready for winter

MAINTAIN WINTERFIT

It is important to plan ahead to prevent problems during start-up and operation caused by paraffin separation.

Super high performance diesel fuel and fuel oil additive for protection against paraffin separation caused by extremely cold conditions.

Benefits:

- Burns off completely without any residue
- Ignitability is not compromised
- No reduction in viscosity, thereby preventing pump wear
- Can be mixed with and is fully compatible with all diesel fuels (except for biodiesel)

Gasoline additive. Improves any gasoline fuel

MAINTAIN GASOLINE PLUS

Fuels with high sulfur content (for example outside the EU), a high proportion of bioethanol (more than 10 %) or of generally low quality often have a negative impact on start-up behavior, combustion and operational reliability. Many fuels are also sold without any additives. To prevent issues such as soiling deposits, any vehicle owner can take action on their own before problems occur.

High performance gasoline additive concentrate for cleaning the fuel and intake system. Recommended for continuous use.

Benefits:

- Recommended for multi-point injection engines
- Recommended for direct-injection engines
- Recommended for carburettor and two-stroke engines
- Excellent removal of soiling/deposits in the combustion chamber, valves, intake system, injectors, fuel lines and fuel tank
- Excellent "keep clean" and "clean up" performance
- Very good corrosion protection
- Very good water separation
- Metal-free and ashless technology
- Burns off without any residue
- Gentle on catalytic converters
- For all standard commercial gasoline fuels
- For gasoline fuels up to E20
- Maintains engine output
- Saves fuel
- Particularly recommended for low-grade fuels
- Particularly recommended for continuous use

Oil binder.

Offers reliable protection from environmental damage

MAINTAIN ABSORPEX

MAINTAIN ABSORPEX is a mineral oil binder granulate with extremely high absorbency for disposal from oil spills and other chemicals in indoor and outdoor areas, e.g. in the event of oil accidents on traffic surfaces or for leaks on solid substrates.

It offers good slip resistance even at full saturation and penetrates through the fine grain into the smallest cracks and indentations.

Oil Binder Type III R, Chemical Binder

Specifications

Reported by Hygiene Institut Gelsenkirchen MPL

Approvals

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FUCHS Recommendations

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Note

The information contained in this brochure is based on the experience and expertise of FUCHS SCHMIERSTOFFE GMBH in the development and manufacture 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 pretreatment, possible external contamination, etc. For this reason, it is not possible to make universally valid statements about the function of our products. Our products must not be used in aircraft/spacecraft or parts thereof. This does not apply insofar as the products can be removed again before components are fitted in an aircraft/ 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 SCHMIERSTOFFE GMBH application engineer to discuss application conditions and the performance criteria of the products before the products are used. It is the responsibility of the user to test the functional suitability of the products and to use them with the corresponding care. Our products are subject to continuous further development. We therefore retain the right to change our product range, the products, and their manufacturing processes as well as all details in this brochure at any time and without warning, provided that no customer-specific agreements exist that require otherwise.

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Contact:

FUCHS SCHMIERSTOFFE GMBH

Friesenheimer Straße 19
68169 Mannheim/Germany
Phone: +49 621 3701-0
Fax: +49 621 3701-7000
E-mail: automotive-fs@fuchs.com
www.fuchs.com/de/en

Export Division

Friesenheimer Straße 19
68169 Mannheim/Germany
Phone: +49 621 3701-1713
Fax: +49 621 3701-7713
E-mail: export-fs@fuchs.com
www.fuchs.com/de/en