

MAINTAIN

Antifreeze, Brake Fluids and Service Products



**LUBRICANTS.
TECHNOLOGY.
PEOPLE.**



Around the clock reliability – at any temperature

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

These offer your vehicle optimum protection at all times – particularly in winter.

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.

and, 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

Premium Performance Coolant Additive based on monoethylene glycol. Free from nitrite, amine, phosphate and silicates. Product dyeing: **orange**

Specifications

ASTM D 3306 TYPE I
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

FUCHS Recommendations

AAFNOR NFR 15-601 TYPE I
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)
HYUNDAI MS 591-08
JASO M325
JIS K2234
JOHN DEERE JDM H5
KOMATSU AF-NAC (ready mix) (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
TOYOTA TSK 2601G-8A
VAUXHALL GME L1301
VW TL 774-D/F (G12+/-different colour)
VOLVO 128 6083/002 (= VOLVO TRUCKS, VOLVO CE, from MY 2005, VOLVO PENTA from MY 05/2010)

MAINTAIN FRICOFIN V

Ultra High Performance Coolant Additive based on monoethylene glycol. Free of nitrites, amines and phosphates. Product dyeing: **pink-violet**

Specifications

ASTM D 3306 TYPE I
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
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-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
VW TL 774-G (G12++)

Approvals

DEUTZ DQC CC-14
MB-APPROVAL 326.5
MB-APPROVAL 326.6



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 -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 MTL5048
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 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 2008:2004 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

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

Approvals

MTU MTL 5048

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

FUCHS Recommendations

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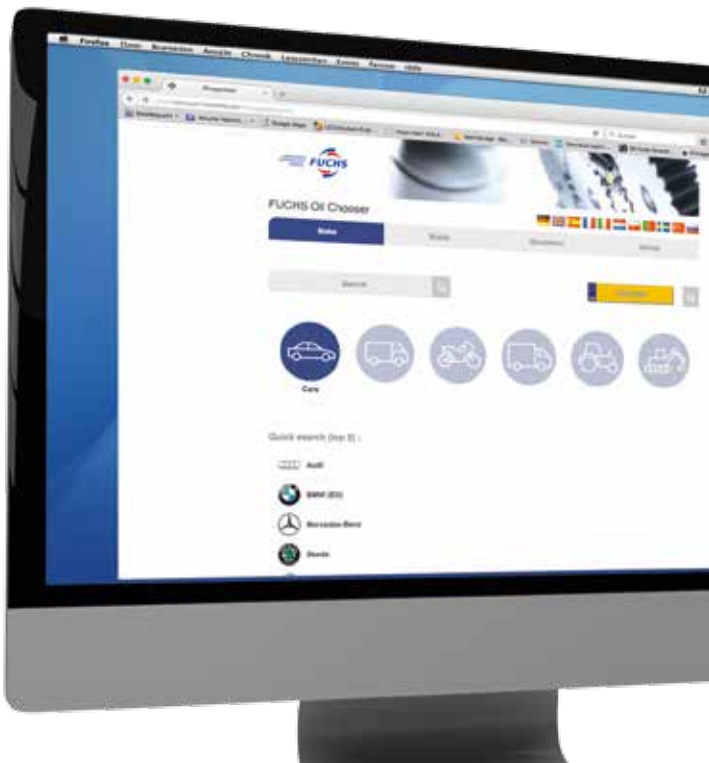
Approvals

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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.



FUCHS

FUCHS Oil Chooser

Motor | **Motor** | Dieselmar | Antifreez

Cars - Opel - Signum 2.8 16V Turbo (2006 - 2007)

The information contained in the oil chooser is based on the experience and know-how of FUCHS 3D-MERKSTOFFE GmbH 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 pretreatment, possible external contamination, etc. For this reason, universally valid statements about the function of our products are not possible. The information given in the oil chooser 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 representative of the performance criteria of the products before the purchase of the product and to use it with the corresponding care. Such products are removed before the components are damaged.

... our product program, the products, and their use with and without warranty, unless otherwise provided in the literature.

3D-MERKSTOFFE GmbH

Veolia C
300 - 3000 - 3000

Signum
300 - 3000 - 3000

- Signum 1.8 16V (2005 - 2006)
- Signum 1.8 16V (2006 - 2006)
- Signum 2.0 16V Turbo (2005 - 2006)
- Signum 2.0 16V Turbo (2006 - 2007)
- Signum 2.2 16V Diesel (2005 - 2006)
- Signum 2.2 16V Diesel (2006 - 2006)
- Signum 2.8 16V Turbo (2006 - 2007)
- Signum 2.8 16V Turbo (2007 - 2008)
- Signum 3.0 V6 (2005 - 2008)
- Signum 1.8 C20T 20P (174 kW) (2006 - 2007)
- Signum 1.8 C20T 20P 40V (2006 - 2006)
- Signum 1.8 C20T 20P 58 kW (2004 - 2006)
- Signum 1.8 C20T 20P (170 kW) (2004 - 2006)
- Signum 1.8 C20T 20P (170 kW) (2006 - 2006)

FUCHS

FUCHS Oil Chooser

Motor | **Motor** | Dieselmar | Antifreez

Cars - Opel

- Karl**
3000 -
- ADAM**
1110 - 1010 -
- Agila A**
1000 - 1000 - 1000
- Agila B**
1000 - 1000 - 1010
- Corsa A**
1000 - 1000 - 1000
- Corsa B**
1000 - 1000 - 1000



Brake fluids. Safe and reliable in any 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:

- A high boiling point offers safety in extreme conditions such as the kinds of very high temperatures that can occur when driving down steep hills. The boiling point describes the characteristic of the sealed new brake fluid. Brake fluids have boiling points of 230°C (DOT 4) or 260°C (DOT 5.1).
- Lowest possible drop in boiling point due to water absorption (high wet-boiling point). The wet-boiling point describes the characteristic at the end of the liquid's life-cycle. Wet-boiling point as per the DOT specifications: 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 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 5.1

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
SAE J 1703/J 1704

FUCHS Recommendations

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Approvals

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MAINTAIN DOT 4

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
SAE J1703/J1704

FUCHS Recommendations

FORD M6C62-A
FORD M6C9103-A
NH 800 A
OPEL 19 42 421

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), as well as EL fuel oils

Fuel additive. Improves all diesel fuels

MAINTAIN DIESEL EFFECT

It is important to plan ahead to prevent problems during start-up and operation caused by increased biogenic additives to the diesel fuel or low-quality fuels (for example outside the EU).

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

Benefits:

- Can be used all year round
- Maintains engine output
- Reduces fuel consumption
- Reduces exhaust emissions
- Improves diesel fuels (as per DIN EN 590)
- Improves biodiesel fuels (as per DIN EN 14214)
- Improves diesel fuels with increased substitute material concentrations (types B7 to B100)
- Offers corrosion protection
- Offers protection from aging
- Offers protection from soiling/deposits
- Removes existing deposits in the tank, fuel lines, injectors, combustion chamber and valves
- Improves demulsibility
- Can render the use of biocides superfluous



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 granular mineral oil binder with extremely high absorption capacity that is used to combat oil pollution and other chemicals in both the indoor and outdoor arena, for example in the case of oil spills on road surfaces or leaks on solid ground. It offers good skid resistance even when fully saturated and, thanks to its fine grain, penetrates even the smallest cracks and recesses. MAINTAIN ABSORPEX is free of asbestos and similar fibrous materials.

Oil Binder Type III R, Chemical Binder

Specifications

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Approvals

Reported by Hygiene Institut Gelsenkirchen MPL

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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