Product catalog

Neste lubricants
and chemicals

NESTE

Contents

Neste Lubricants

Finland is a country of opposites. The warm embrace of summer and bright nights here give way to autumn storms. And then comes the polar nights with frost and ice - the snowy nature is almost inactive until the spring sun wakes it up again.

Harsh natural conditions are the best laboratory for testing our lubricants. We know all about extreme conditions because we live in them. We have learned to enjoy the challenging nature of Finland and turned it to our advantage. Lubricants that have been successfully tested in the harsh conditions of the north will work everywhere and help you achieve your goals, wherever you are.

Our high quality lubricants are formulated with high quality base oils and the best available additives. Combined with our decades of knowledge and our extensive know-how on both automotive and industrial lubricants, the result is exceptional: World-class lubricants, including products which are produced with renewable and circular raw materials, making it possible to take a step towards a more sustainable future.

The quality and reliability of our lubricants are tested every day – in different countries and under different conditions. The green Sustainable Technology by Neste icon refers to our more sustainable products and reducing environmental impact. In addition to making it possible for more sustainable choices in lubrication, they also offer excellent performance and technical properties. The performance of Neste ReNew lubricants is equivalent to or even better than similar conventional lubricants. The best products in their class are awarded the blue Advanced Technology by Neste label. The label represents the application of the latest technologies in one or many of the fields of performance, efficiency and fuel economy, as well as long service life.

We closely follow market trends and the needs of original equipment manufacturers: we constantly improve products and ensure that they meet modern requirements. We proudly promise the highest reliability and performance of engines and equipment in all areas of our products. With the same pride, we promise that our products will via improvements have less and less environmental impact year after year throughout their entire life cycle.

Responsibility is a comprehensive understanding of sustainable development and a better future for both the environment and people. Our responsible approach extends to everything we do: the production chain, our services, product distribution, partnerships. We create responsible choices and sustainable solutions that work for a sustainable future and protect our planet.

If you are not ready to make compromises and want superior quality, professional approach and comprehensive responsibility, then Neste lubricants are your choice.

You will find the solutions to your needs in our extensive product range

Neste lubricants have been granted quality certificates complying with ISO 9001, 14001, and OHSAS 18001 standards.

Our product range has the exact solutions to your needs, from professional traffic to heavy industry. To make finding the right products easier, the products listed in this catalog are divided according to the most typical uses. In addition, our product range includes special products for the most demanding uses.

We are constantly developing our products in order to respond to our customers' ever-changing needs. That is why product names, specifications and classifications may change. There is a list of old and new product codes at the end of the product catalogue.

Basic concepts related to lubricants

Density

Density refers to the bulk density of the substance. For oils, it is usually expressed at the temperature of +15 °C or +20 °C, and the unit is kg/m^3. The densities of lubricant oils vary between approx. 700–950 kg/m^3 depending on the base oil's quality, viscosity and additives used.

Viscosity

The thicker the liquid the higher its viscosity. The viscosity of lubricant oils is usually declared in cSt (centistoke)=mm2/s (SI system) or cP (centipoise) = mPas (SI system).

Temperature must always be mentioned when describing viscosity regardless of what unit is used. All oils thin strongly when the temperature rises. Typical viscosity of SAE 10W engine oil in -20 °C temperature may be 2,000 cP, but if it heats up to +100 °C, the viscosity will be as low as 5.2 cSt.

Viscosity index

The Viscosity index (VI) refers to the propensity of liquids to thin as temperature rises. The more the liquid in question thins, the lower its viscosity index. VI of single grade engine oils is approx. 95–110, while that of multigrade oils may exceed 200.

Flash point

Flash point refers to the flammability of fluids. Flash point is the temperature at which the fluid emits so much flammable gas measured with a certain method that they flare up when lit with open fire while the fluid itself does not remain burning.

Ignition temperature

Ignition temperature is the temperature at which the gases evaporate when a fluid is heated in an open fire pot burn for at least five seconds when lit with open fire. The ignition temperature is typically 10–50 °C higher than the flash point.

Pour point

Oil thickens when the temperature drops. At a certain temperature, it no longer flows at its own weight. This temperature is referred to as the pour point. The pour point depends, among other things, on the viscosity of the oil and its chemical structure. In paraffinic oils, thickening is caused by the wax in the oil, which can be distinguished as crystals. The more the oil cools down the larger the crystals grow, eventually forming a network obstructing the flow within the oil.

Alkali charge

When the engine is running, acidic compounds caused by the combustion of fuel enter the fuel and these must be neutralized in order to prevent corrosion of metal parts. For this reason, engine oils contain additives to create an alkali charge. Its amount is expressed in terms of total base number (TBN).

Storage and handling of lubricants

The storage location and conditions must be chosen so that water and impurities cannot contaminate the lubricant. The storage location must be sheltered from rain and as little subject to changes in temperature as possible. Changes in temperature may cause condensation in containers that are not tightly shut. It is best to store barrels on their sides so that the fill hole is below the oil level.

Products sensitive to freezing, such as metal working emulsions and detergents must be transported and stored safe from freezing.

Official guidelines and regulations must be followed when handling lubricants, oils and chemical. For more detailed product-specific information, see the safety data sheets.

Color-coded products

The visual appearance of Neste lubricants is color-coded to make it easier to choose the right product.

New!

GREEN
High quality, more sustainable lubricants, produced using renewable and circular raw materials.

GOLD
Top quality lubricants that meet the toughest requirements of automobile manufacturers.

SILVER
Very high quality lubricants suitable for most vehicles, light and heavy alike.

BLUE
Lubricants of high quality, also suitable for older vehicles. Excellent price-to-quality ratio.

Icons and symbols

In this product catalogue and product labels, the icons and symbols provide a quick indication of the product's properties and applications.

APPLICATION ICON
The icon indicates the types of equipment the product is intended for. For example passenger car, motorcycle, etc.


Excellent cold start properties


Reduces emissions

PRODUCT PROPERTY SYMBOL
The product's main properties and advantages are communicated with a symbol and explanatory text.

Engine oils

How to select the right engine oil

Correct viscosity
(SAE classification)

The engine must start also in temperatures way below freezing and oil must reliably lubricate the engine also in high temperatures and under heavy burden. In winter, using an engine-block heater raises the oil temperature only by a couple of degrees, so you should select the oil according to the outside temperature unless you are using a special oil heater.

Correct performance:
(API and/or ACEA classifications as well as specifications by engine manufacturers)

The quality of oil affects the oil change interval. The properties of high quality engine oil will last longer and enable the long oil change intervals recommended by the car manufacturer. Car manufacturers declare the minimum requirements for engine oil as well as viscosity classes in the owner's manual of the vehicle.

SAE class	Viscosity cP	Pumpability temperature	Viscosity cSt/100 °C		HSHT viscosity 150 °C 10^6 1/s
	Max.	Max.	Min.	Max.	
0W	6200 / -35 °C	-40 °C	3.8	–	–
5W	6600 / -30 °C	-35 °C	3.8	–	–
10W	7000 / -25 °C	-30 °C	4.1	–	–
15W	7000 / -20 °C	-25 °C	5.6	–	–
20W	9500 / -15 °C	-20 °C	5.6	–	–
25W	13000 / -10 °C	-15 °C	9.3	–	–
20	–	–	5.6	9.3	2.6
30	–	–	9.3	12.5	2.9
40	–	–	12.5	16.3	2.9–3.7*
50	–	–	16.3	21.9	3.7
60	–	–	21.9	26.1	3.7

*2.9 (0W-40, 5W-40, 10W-40)
3.7 (15W-40, 20W-40, 25W-40, 40)

European ACEA classification for motor and engine oils

A/B Gasoline and diesel engine oils for passenger cars and vans

A1/B1 Thin low friction special oils. Warning: Not suitable for all cars. Check suitability from the vehicle manual. No longer in use.

A3/B3 Top quality oils suitable for general use in high-powered engines, extended oil change intervals and demanding conditions.

A3/B4 Like class A3/B3, but better suited for some direct injection diesel engines. Can be used in cars with the requirement A3/B3. No longer in use.

A5/B5 Top quality thin low friction special oils for extended oil change intervals. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

A7/B7 Top quality thin low friction special oils for extended oil change intervals. Relative to A5/B5 with additional engine protection requirements. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

C Gasoline and diesel engine oils better suited for catalysts and exhaust particle filters of passenger cars and vans

C1 Thin low friction special oils. Prolongs the age of catalysts and diesel particle filters. Contains more sulfur and phosphorus (Low SAPS) than A1/B1 oils or C2, C3 and C4 oils. Low ash generation. Warning: Not suitable for all cars. Check suitability from the vehicle manual. No longer in use.

C2 Low friction special oils with sulfur, phosphorus and ash limits (Mid SAPS) higher than in C1 class. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

C3 Top quality oils that prolongs the age of catalysts and diesel particle filters. Contains less sulfur and phosphorus (Mid SAPS) than A3/B4 oils. Low ash generation. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

C4 Top quality oils that prolongs the age of catalysts and diesel particle filters. Contains less sulfur and phosphorus (Low SAPS) than C2 and C3 oils. Low ash generation. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

C5 Top quality oils that prolongs the age of catalysts and diesel particle filters. Contains less sulfur and phosphorus (Mid SAPS) than A3/B4 oils. Low ash generation. Excellent fuel-saving properties, better than C3 Can be used if the requirement is ACEA A1/B1. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

C6 Relative to C5 with additional engine protection requirements. Warning: Not suitable for all cars. Check suitability from the vehicle manual.

E Diesel engine oils for heavy equipment

E4 Top class special oils, e.g., for Mercedes-Benz, MAN, DAF diesel engines for long change intervals. Suitable for Euro 1, 2, 3, 4 and 5 (SCR/EGR) engines. Not for cars equipped with exhaust particle filters. Check suitability from the vehicle manual.

E8 **Former E6** Top class (Low SAPS) engine oils for most heavy equipment diesel engines for long change intervals. Well suited for vehicles equipped with diesel particle filters (DPF) and when using low-sulfur fuel (max. 50 ppm). Check suitability from the vehicle manual.

E7 Top class special oils for diesel engines and long change intervals. Suitable for Euro 1, 2, 3, 4 and 5 (SCR/EGR) engines. Not for cars equipped with exhaust particle filters. Check suitability from the vehicle manual.

E11 **Former E9** Top class (Mid SAPS) engine oils for most heavy equipment diesel engines for long change intervals. Well suited for vehicles equipped with diesel particle filters (DPF) and when using low-sulfur fuel (max. 50 ppm). Check suitability from the vehicle manual.

API classification

The American API classification comprises gasoline engine S classes, such as API SP, and diesel engine C or F classes, such as CK-4 or FA-4.

Mixing oils

Oils used for the purpose and meeting the same quality specifications can usually be mixed together regardless of whether they are single grade or multigrade oils. If a modern, high detergent engine oil is applied to an engine where an older class of low detergent oil has been used, it is recommended that the first change interval is shortened to, for example, 1,000 kilometers or the engine is cleaned in some other way.

Oil change intervals

Oil must always be changed at the latest after the number of kilometers driven indicated by the car manufacturer has been reached. The maximum change interval is shortened by, for example:

- driving in town and short distances
- driving in winter and cold engine
- dusty conditions
- too high temperatures

Even though oils have been developed strongly and endure the long change intervals allowed by engine manufacturers, the cheapest way to prolong the life of an engine is to change oil at sufficiently regular intervals.

Oil consumption

Even an engine that is in good order naturally consumes some oil. This is compensated by fuel dilution, which can be up to 10% especially in gasoline engines during winter and short trips. This will make the oil level rise after which, when driving for longer, the level can quickly drop as oil thinned by gasoline is burnt and gasoline evaporates.

Oil consumption is most increased by driving at full throttle and high revs with recurrent engine braking.

Neste Pro+ F 0W-30

Fully synthetic motor oil

Meets or exceeds the following quality criteria:
API SP-RC, SP, SN PLUS, SN, SM, API SL
ACEA C2, ACEA A5/B5
ILSAC GF-6A/GF-5/GF-4/GF-3
BMW Longlife-12 FE
Ford WSS-M2C950-A
MB-Approval 227.61
MB-Approval 229.61

- Excellent cold start properties
- Excellent fuel-saving properties
- Reduces emissions

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1182	0W-30	49.7	9.8	184	-42

Neste Pro+ F 5W-20

Fully synthetic motor oil

Meets or exceeds the following quality criteria:
API SN-RC, SN, SM, SL, SJ
ACEA C5
ILSAC GF-5, GF-4, GF-3, GF-2
Ford WSS-M2C-948-B, 948-A
Ford WSS-M2C-925-B, 925-A
Ford WSS-M2C-913-C, 913-B, 913-A
Jaguar Land Rover STJLR.03.5004

- Excellent cold start properties
- Excellent fuel-saving properties
- Very clean engine
- Protects against wear

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1176	5W-20	42	7.8	155	-39

Neste Pro+ M 0W-20

Fully synthetic motor oil

Meets or exceeds the following quality criteria:
API SP, SP-RC, SN PLUS, SN-RC, SN, SM, SL, SJ
ACEA C6, C5
ILSAC GF-6A/GF-5/GF-4/GF-3
BMW Longlife-14 FE+
BMW Longlife-17 FE+
Chrysler MS 12145
Fiat 9.55535-GSX
Ford WSS-M2C947-B1
Ford WSS-M2C962-A1
MB-Approval 229.71
MB-Approval 229.72
Opel OV041547
STJLR.03.5006

- Ultimate cold start performance
- Outstanding fuel economy benefits
- Excellent engine cleanliness
- Low emission

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1186	0W-20	41	8.2	179	-48

Neste Pro+ V 0W-20

Fully synthetic motor oil

Meets or exceeds the following quality criteria:
ACEA C5
Volvo VCC RBSO-2AE

- Excellent cold start properties
- Excellent fuel-saving properties
- Also suitable for hybrid cars
- Efficient reduction of friction

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1177	0W-20	49	9.2	188	-45

Neste Pro+ W LL-III 0W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:

ACEA C3
BMW LL-04 (2019-)
BMW Longlife-04 (2019-)
MB 229.31
MB-Approval 229.51
MB 229.52
Porsche C30
VW 504 00 / 507 00

- Ultimate cold start performance
- Excellent fuel-saving properties
- Long oil change intervals
- Reduces emissions

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1188	0W-30	65	12.3	190	-54

Neste Pro+ W LL-III 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:

API SN, SM, SL, SJ
ACEA C3
BMW Longlife-04 (2019-)
MB 229.31
MB-Approval 229.51
Porsche C30
VW 504 00 / 507 00
VW 501.01 / 502.00 / 503.01
VW 505.00 / 503.00 / 506.00
VW TL 52195

- Excellent cold start properties
- Excellent fuel-saving properties
- Long oil change intervals
- Reduces emissions

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1178	5W-30	69	11.8	170	-42

Neste Pro+ W LL-IV 0W-20

Fully synthetic motor oli

Meets or exceeds the following quality criteria:

API SN+, SN, SM, SL, SJ
ACEA C5
Porsche C20
VW 508.00/509.00
VW TL 52577

- Ultimate cold start performance
- Outstanding fuel economy benefits
- Excellent engine cleanliness
- Low emission

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1187	0W-20	40	8	177	-60

Neste Pro+ 0W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:

API SP, SN PLUS, SN, SM, SL
ACEA A5/B5
BMW Longlife-01 FE
MB-Approval 229.6
Renault RN0700
Volvo VCC95200377

- Excellent cold start properties
- Excellent fuel-saving properties
- Long oil change intervals

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1167	0W-30	54	9.7	169	-54

Neste Pro F 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SP, SN PLUS, SN-RC, SN, SM, SL, SJ
ACEA A5/B5
Ford WSS-M2C913-D
Renault RN0700
STJLR 03.5003

- Excellent cold start properties
- Excellent fuel-saving properties
- Long oil change intervals

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1175	5W-30	53	9.8	170	-42

Neste Pro C2/C3 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ
ACEA C2/C3
BMW Longlife -01
BMW Longlife -04
Fiat 9.55535-S1, 9.55535-S2, Flat 9.55535-S3
GM dexos2
MB-Approval 229.31
MB-Approval 229.51
MB-Approval 229.52
Opel OV0401547
VW 505.00 / 505.01

- Excellent cold start properties
- Excellent fuel-saving properties
- Long oil change intervals

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1184	5W-30	72	12	164	-39

Neste Pro C3 5W-40

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ/CF
ACEA C3
BMW Longlife-04 (-2019)
Ford WSS-M2C917
GM dexos2
MB 226.5
MB-Approval 229.31
Porsche A40
Renault RN0700 / RN0710
VW 505 00 / 505 01

- Excellent cold start properties
- Helps reduce fuel consumption
- Long oil change intervals
- Reduces emissions

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1173	5W-40	87	14.2	170	-51

Neste Pro C4 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
ACEA C4
MB 229.31
MB-Approval 226.51
Renault RN0720

- Excellent cold start properties
- Excellent fuel-saving properties
- Reduces emissions

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1174	5W-30	73	12.2	165	-42

Neste D1 0W-20

Fully Synthetic Motor Oil

Meets or exceeds the following quality criteria:
API SP-RC, SP, SN PLUS, SN, SM, SL, SJ
GM dexos1 Gen 3, Gen 2
ILSAC GF-6A, GF-5
Fiat 9.55535-CR1
Ford M2C962-A1

- Excellent cold start properties
- Excellent fuel-saving
- Very clean engine

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1191	0W-20	47.6	9	173	-42

Neste Pro 0W-40

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SP, SN PLUS, SN-RC, SN, SM, SL, SJ
ACEA A3/B4
BMW Longlife-01 (2019-)
Ford WCC-M2C937-A
MB-Approval 226.5
MB-Approval 229.3
MB-Approval 229.5
Renault RN0710
VW 502 00 / 505 00

- Excellent cold start properties
- Helps reduce fuel consumption
- Long oil change intervals

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1168	0W-40	77	13.5	180	-45

Neste Pro 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
ACEA A3/B4, A3/B3
API SL, SJ/CF
BMW Longlife-01 (2019-)
MB-Approval 226.5
MB-Approval 229.5
MB-Approval 229.3
Renault RN0700 / RN0710
VW 502.00 / 505.00

- Excellent cold start properties
- Excellent fuel-saving properties
- Long oil change intervals

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1169	5W-30	73	12	167	-36

Neste Premium A3/B4 5W-40

Synthetic motor oil

Meets or exceeds the following quality criteria:

API SN, SM, SL, SJ/CF
ACEA A3/B4
Fiat 9.55535.N2, 9.55535.Z2
GM-LL-A-025, GM-LL-B-025
MB 229.3
Porsche A40
Renault RN 0700 / RN 0710
VW 502 00 / 505 00

- Good cold start performance
- Comprehensive engine protection
- Long drain interval

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1191	0W-20	87	14,2	169	-39

Neste Premium A3/B4 10W-40

Synthetic motor oil

Meets or exceeds the following quality criteria:

API API SN, SM, SL, SJ/CF
ACEA A3/B4
Fiat 9.55535.D2, 9.55535.G2
MB 229.3
PSA B71 2300
Renault RN 0700 / RN 0710
VW 502 00 / 505 00

- Good cold start performance
- Comprehensive engine protection
- Long drain interval

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1191	0W-20	47.6	9	173	-42

Neste Special 10W-30

Multigrade gasoline motor oil

Meets or exceeds the following quality criteria:

API SF/CC

- Good cold start performance
- For high mileage cars

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1179	10W-30	64	10.1	144	-36

Neste ReNew passenger car engine oils

Neste ReNew A5/B5 0W-30

Fully synthetic motor oil from renewable base oil

Meets or exceeds the following quality criteria:
API SL, SJ
ACEA A5/B5

- Produced with renewable base
- Ultimate cold start performance
- Improved fuel economy benefits
- Also suitable for hybrid cars

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1193	0W-30	52,7	9,8	175	-42

Neste ReNew C2 0W-30

Fully synthetic motor oil from renewable base oil

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ
ACEA C2

- Produced with renewable base
- Ultimate cold start performance
- Improved fuel economy benefits
- Also suitable for hybrid cars

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1194	0W-30	53,9	10.1	177	-42

Neste ReNew C5 0W-20

Fully synthetic motor oil from renewable base oil

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ
ACEA C5

- Produced with renewable base
- Ultimate cold start performance
- Improved fuel economy benefits
- Also suitable for hybrid cars

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1195	0W-20	44	8,4	169	-42

Neste Turbo+ LSA S4 5W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CK-4, CJ-4, CI-4 PLUS, CI-4/SN
ACEA E6/E9/E7
JASO DH-2
Caterpillar ECF-3, ECF-2, ECF-1a
Cummins CES 20086, CES 20081
Deutz DQC IV-10 LA,
Deutz DQC IV-18 LA
Ford WSS-M2C213-A1
Iveco 18-1804 TLS E9
MAN M 3477
Mack EOS-4.5,
EO-O Premium Plus, EO-N
MAN M 3677, M 3775, M 3271-1
MB-Approval 228.31,
MB-Approval 228.51,
MB-Approval 228.52
MTU Type 3.1, MTU Type 2.1
Renault VI RLD-3, VI RLD-2,
VI RLD
Scania LDF-4
Volvo VDS-4.5, VDS-4, VDS-3

- Excellent cold start performance
- Improved fuel economy benefits
- Long drain interval
- Low emission

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1879	5W-30	71	12,1	169	-42

Neste Turbo+ LSA-II 10W-40

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CK-4, CJ-4, CI-4 PLUS, CI-4
ACEA E8/ E11/ E7/ E6/ E9
Caterpillar ECF-3, ECF-2, ECF-1a
Cummins CES 20081
Detroit Diesel 93K218
Deutz DQC IV-18 LA, IV-10 LA
JASO DH-2
MACK EO-S-4,5, EO-N
Mack EO-O Premium Plus,
MAN M3775
MB-Approval 228.52
MB-Approval 228.51
MB-Approval 228.31
MTU Type 3.1, Type 2.1
Renault VI RLD-3,
Renault VI RLD-2
Voith Class B
Volvo VDS-4,5, VDS-4
Volvo VDS-3

- Good cold start performance
- Long drain interval
- Low emission
- Excellent engine cleanliness

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1874	10W-40	98.5	14	149	-42

Neste Turbo+ NEX 10W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CK-4, CJ-4, CI-4 PLUS, CI-4,
CH-4, CG-4, CF-4
ACEA E11, E9
Caterpillar ECF-3, ECF-2, ECF-1a
Cummins CES 20086, CES 20081
Detroit Diesel 93K222
Deutz DQC III-18 LA
MAN M 3775
Mack EOS-4.5,
Mack EO-O Premium Plus
MB-Approval 228.31
MTU Type 2.1
Renault VI RLD-4, Renault VI RLD-3
Volvo VDS-4.5, Volvo VDS-4

- Good cold start performance
- Fuel economy benefits
- Long drain interval
- Excellent engine cleanliness

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1872	10W-30	79	11,8	142	-42

Neste Turbo+ NEX 10W-40

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CK-4, CJ-4, CI-4 PLUS, CI-4/SN
ACEA E11/E7, E9
JASO DH-2
Caterpillar ECF-3, ECF-2, ECF-1a
Cummins CES 20086, CES 20081
Detroit Diesel DFS 93K222
MAN M 3575
Renault VI RLD-2, RLD
Scania Low Ash
Volvo VDS-4, VDS-3, VDS-2
DQC III-18LA
Mack EOS-4.5
MAN M 3775
MB-Approval 228.31
MTU 2.1
Renault VI RLD-3
Volvo VDS-4.5

- Good cold start properties
- Fuel economy benefits
- Long drain interval
- Low emission

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1869	10W-40	94	14	152	-42

Neste Turbo+ VPX 15W-40

Semisynthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4
ACEA E11, E9
ALLISON TES 439
Caterpillar ECF-3, ECF-2, ECF-1a
Cummins CES 20086, CES 20081
Detroit Diesel 93K222
Deutz DQC III-10 LA
JASO DH-2
MAN M 3775
Mack EOS-4.5,
Mack EO-O Premium Plus
MB-Approval 228.31
MTU Type 2.1
Renault VI RLD-4, Renault VI RLD-3
Volvo VDS-4.5, Volvo VDS-4

- Fuel economy benefits
- Long drain interval
- Excellent engine cleanliness

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1878	15W-40	107	14,3	137	-36

Neste Turbo+ S5 5W-20

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:

MAN M 3977
Scania LDF-5

- Long drain interval
- Outstanding fuel economy benefits
- Extremely good cold properties
- Clean engine

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1880	5W-30	47	8,2	147	-42

Neste Turbo+ S3 10W-40

Synthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CF, CD
ACEA E4/E7
MAN M 3277
MB-Approval 228.5
Renault RXD/RLD-2
Scania LDF-3, LDF-2, LDF
VOLVO VDS-3, VDS-2

- Good cold start performance
- Fuel economy benefits
- Long drain interval

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1875	10W-40	92	13,5	156	-39

Neste Turbo+ FA-4 5W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API FA-4
API SN
Cummins CES 20087
Detroit Diesel DDC 93K223
JASO DH-2/DH-2F
MB-Approval 228.61

- Excellent cold start performance
- Outstanding fuel economy benefits
- Low emission
- Excellent engine cleanliness

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1877	5W-30	58	9,6	150	-45

Neste Turbo+ 5W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
ACEA E4/E7
Cummins CES 20077
Deutz DQC IV-10
Iveco 18-1804 TFE
Mack EO-N
MAN M 3277
MB 235.28
MB-Approval 228.5
MTU Type 3, Type 2
Renault VI RLD-2, Renault VI RLD
Scania LDF-3, LDF-2, LDF
Volvo VDS-3, Volvo VDS-2

- Excellent cold start properties
- Improved fuel economy benefits
- Long drain interval

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1867	5W-30	74	12	163	-48

Neste Turbo LXE 10W-30

Semi-synthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4, CG-4, CF-4/SL
ACEA E7/E5/E2
Caterpillar ECF-2, ECF-1-a
Cummins CES 20078, CES 20077, CES 20076
Deutz DQC III-10
Global DHD-1
JASO DH-1
Mack EO-N
MAN M 3275
MB-Approval 228.3
MTU Type 2
Renault VI RLD, Renault VI RLD-2
Volvo VDS-2, Volvo VDS-3

- Good cold start performance
- Improved fuel economy benefits

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1862	10W-30	81	12.2	146	-42

Neste Turbo LXE 10W-40

Synthetic diesel engine oil

Meets or exceeds the following quality criteria:
PI CI-4, CH-4, CG-4, CF-4/SL
ACEA E7/E5/E2
Caterpillar ECF-2, ECF-1-a
Cummins CES 20078, CES 20077, CES 20076
Deutz DQC III-10
Global DHD-1
JASO DH-1
Mack EO-N
MAN M 3275
MB-Approval 228.3
MTU Type 2
Renault VI RLD, Renault VI RLD-2
Volvo VDS-2, Volvo VDS-3

- Good cold start properties
- Wear protection

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1863	10W-40	100	14.8	152	-42

Neste Turbo LXE 15W-40

Multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4, CG-4, CF-4/SL
ACEA E7/E5/E2
Global DHD-1
JASO DH-1
Caterpillar ECF-2, ECF-1-a
Cummins CES 20078, CES 20077, CES 20076
Detroit Diesel DFS 93K215
Deutz DQC III-10
Mack EO-N
MAN M 3275
MB-Approval 228.3
MTU Type 2
Renault VI RLD
Renault VI RLD-2
Volvo VDS-2
Volvo VDS-3

- Wear protection
- Clean engine

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1864	15W-40	113	14.5	130	-39

Neste Diesel 10W

Monograde diesel engine oil

Meets or exceeds the following quality criteria:
API CF, CD

Wear protection

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1855	10W	39	6.5	120	-39

Neste Diesel 10W-30

Multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CF-4, CE, CD/SF
ACEA E2
ALLISON C-3
Caterpillar TO-2
Mack EO-J
MIL-L-2104 E

Good cold start performance
Wear protection

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1856	10W-30	70	10.6	138	-36

Neste Diesel 30

Monograde diesel engine oil

Meets or exceeds the following quality criteria:
API CF, CD

Wear protection

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1859	30	73	10.5	129	-36

Neste Farm Universal 10W-30

Super Tractor Oil Universal

Meets or exceeds the following quality criteria:
STOU
API CG-4, CF-4, CF, CE/SF, SE
API GL-4
ACEA E3, E2, E1
Allison C-4, C-3
Caterpillar TO-2
Eaton Vickers I-286-S, M-2950-S
Ford M2C159B, C
JDM J20C, J27
MF M1139, M1144, M1145
ZF TE-ML 06B, 06R, 07B

Good cold start performance
Broad coverage
Wet brake compatible

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1861	10W-30	69	10.5	140	-42

Neste ReNew STOU super tractor oil universal

Neste ReNew STOU 10W-30

STOU from re-refined base oil

Meets or exceeds the following quality criteria:
API CG-4, CF-4, CF, CE, CD/SF, CD/SE
API GL-4
ACEA E3, E2, E1
Allison C-4, C-3
Case MS-1204, 1206, 1207, 1209
Caterpillar TO-2
CNH MAT 3525, 3526
Ford M2C 86B, 86C, 134D, 159B, 159C

Ford New Holland 82009201,82009202,82009203
John Deere J20C, J20D, J27
Massey Ferguson M1135, M1143, M1144, M1145
Sauer Sunstrand/Danfoss: Hydrostatic Trans Fluid
Sperry Vickers/Eaton I-286-S, M2950S
ZF TE-ML 06B, 06R, 07B

- Circular economy product
- Good cold start performance
- Broad coverage
- Wet brake compatible

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1192	10W-30	66	10,7	151	-32

Looking for the right product?

Look for the lubricant recommendations for your vehicle in the Internet.

You can conveniently search for products suitable for your vehicle with the registration number of your vehicle. Using this service, you can easily find the Neste lubricants and chemicals best suited for your vehicle.

https://neste.lubricantadvisor.com/en

Motorcycle engine oils

Neste Pro Bike 10W-40

Fully synthetic engine oil

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ
JASO MA-2

- Good cold start properties
- Long oil change intervals
- Wet clutch compatible

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
1170	10W-40	91	13.8	155	-42

Two-stroke engine oils

Neste Super Racing 2T

Fully synthetic two-stroke oil

Meets or exceeds the following quality criteria:
API TC++
JASO FD
ISO-L-EGD
Husqvarna 266
Piaggio Hexagon

- Excellent lubricating properties
- Withstands high temperatures
- Low smoke generation

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Pour point °C
1941	54	9.4	-48

Neste Super 2T

Fully synthetic two-stroke oil

Meets or exceeds the following quality criteria:
API TC
CEC TSC-3

- Low ash residue
- For premix and injection lubrication
- Low carbon build-up

Product number	SAE	Pour point °C
1939	50 (oil part)	-45

Neste Marine 2T

Two-stoke oil for outboard engines

Meets or exceeds the following quality criteria:
API TD
NMMA TC-W3

- For premix and injection lubrication
- Ashless
- Low carbon build-up

Product number	Pour point °C
1938	-42

Gearbox and drive gear oils

SAE viscosity classification for gearbox oils

•••SAE classification determines the viscosity of gearbox and drive gear oils without taking any other properties into account.

•••The winter use classes are SAE 70W, 75W, 80W and 85W.

•••The summer use classes are 90 and 140.

SAE class	Maximum temperature 150,000 cP Viscosity	Viscosity cSt/100 °C	
		Minimum	Maximum
70W	-55 °C	4.1	
75W	-40 °C	4.1	
80W	-26 °C	7.0	
85W	-12 °C	11.0	
90		13.5	24.0
140		24.0	41.0

API performance classification for gearbox oils

•••GL-1 without EP (Extreme Pressure) additive, low surface pressure

•••GL-4 with EP additive, for synchronized gearboxes

•••GL-5 approx. two times the EP additive compared to GL-4, for hypoid differentials

Power transmission oils

Neste Pro Axle TDL 75W-90

Fully synthetic Total Drive Line power transmission oil

Meets or exceeds the following quality criteria:
SAE 75W-90
SAE J2360
API GL-4/GL-5/MT-1
MIL-PRF-2105 E
ArvinMeritor 0-76-N
Mack GO-J
MAN 341 Typ E3 (Eaton Fuller)
MAN 342 Typ M3
MAN 341 Type Z2
MAN 342 Type S1
MB-Approval 235.8
Scania STO 1:1 G (STO 1:0)
Scania STO 2:0 A FS
Volvo 97312
ZF TE-ML 05A, 12L, 12N, 16F, 17B, 19C, 21A

- EP — Excellent EP properties
- Wide range of applications
- °C — Very wide operating temperature range
- Reduces friction

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2152	75W-90	107	15.3	152	-54	70,000 / -40 °C

Neste Pro Axle 75W-90

Fully synthetic drive gear oil

Meets or exceeds the following quality criteria:
SAE 75W-90
API GL-5
Mack GO-J
MAN 342 M2
MIL-PRF-2105E
SAE J2360
SCANIA STO 1:0
ZF TE-ML 05A, 12M, 16B, 17B, 19B

- Very wide operating temperature range
- Excellent EP properties
- Reduces friction
- Good oxidation resistance

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2151	75W-90	86	14.7	180	-54	29,800 / -40 °C

Neste Pro Axle 75W-140

Fully synthetic drive gear oil

Meets or exceeds the following quality criteria:
75W-140
API GL-5
Mack GO-J
MIL-PRF-2105E
SAE J2360
SCANIA STO 1:0
ZF TE-ML 05A, 16D, 19B

- Very wide operating temperature range
- Excellent EP properties
- Reduces friction
- Good oxidation resistance

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2150	75W-140	172	25.0	181	-48	111000 / -40 °C

Neste Premium Axle 80W-90

Synthetic gearbox and drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
API MT-1
MIL-L-2105 D
SAE J2360
AAM MS-2373
ARVIN MERITOR AXLES
DAF
IVECO
Mack GO-J
MAN 342 M2
MERITOR O-94, O76-A, O76-B
MERITOR O76-D
MIL-PRF-2105E
SCANIA STO 1:0
Volvo 97321
ZF TE-ML 04G, 05A, 07A, 08, 12M, 16B, 16C, 16D, 17B, 19B, 21A

- Excellent EP properties
- Helps reduce fuel consumption
- Reduces friction

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2149	80W-90	87	14.3	170	-45	9,100 / -26 °C

Neste Premium Axle 80W-140

Synthetic gearbox and drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
API MT-1
MIL-L-2105 D
SAE J2360
AAM MS-2373
ARVIN MERITOR AXLES
DAF
IVECO
Mack GO-J
MAN 342 M2
MERITOR O-94, O76-A, O76-B
MERITOR O76-D
MIL-PRF-2105E
SCANIA STO 1:0
Volvo 97321
ZF TE-ML 04G, 05A, 07A, 08, 12M, 16B, 16C, 16D, 17B, 19B, 21A

- Excellent EP properties
- Helps reduce fuel consumption
- Reduces friction

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2148	80W-140	177	25.2	176	-42	27,400 / -26 °C

Neste Axle 80W-90

Drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
ZF TE-ML 07A, 08, 24A

Good oxidation resistance
Excellent EP properties

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2146	80W-90	128	14.0	107	-30	99,000 / -26 °C

Neste Axle 80W-140

Drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
MIL-L-2105 D

Good oxidation resistance
Excellent EP properties

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2145	80W-140	190	25.7	170	-39	32,600 / -26 °C

Neste Axle LS 80W-90

Limited slip drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
MIL-L-2105 D
ZF TE-ML 05C, 12C, 21C

Excellent friction properties
Excellent EP properties

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2147	80W-90	127	14.4	113	-33	49,000 / -26 °C

Neste Pro Gear 75W-80

Fully synthetic gearbox oil

Meets or exceeds the following quality criteria:
SAE 75W-80
API GL-4
Volvo 97307
ZF TE-ML 08, 13
MAN 341 Z4
ZF TE-ML 01L, 02L, 16K

- Very wide operating temperature range
- Excellent EP properties
- Good oxidation resistance

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2112	75W-80	56	9.7	157	-42	88000 / -40 °C

Neste Pro Gear 75W-90

Fully synthetic gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
MIL-L-2105

- Very wide operating temperature range
- Excellent EP properties
- Good oxidation resistance

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2113	75W-90	84	14.5	181	-63	28,500 / -40 °C

Neste Gear GL-4 80W-90

Gearbox oil

Meets or exceeds the following quality criteria:
API GL-4

- Good oxidation resistance
- Good protection against wear

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2120	80W-90	152	14.7	95	-33	150,000 / -26 °C

Neste Premium Gear UTTO

Synthetic hydraulic oil and power transmission oil for agricultural machines

Meets or exceeds the following quality criteria:
API GL-4
Caterpillar TO-2
Case MS 1206
Case MS 1207
Case MS 1209
Ford M2C 86 A/B/C, 134 C/D
John Deere J 20 A/C
John Deere J 20 B/D
Massey Ferguson M1110, M1127A, M1135, M1143
MF CMS M1145
New Holland NH-410B
Volvo 97303 (VCE WB 101)

- Good EP properties
- Multi-purpose lubricant
- Very good protection against wear
- Very wide operating temperature range

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Tunneling point °C
2137	5W-30	64	10.8	160	-42	10,400 / -26 °C

Neste Gear UTTO

Hydraulic oil and power transmission oil for agricultural machines

Meets or exceeds the following quality criteria:
API GL-4
Allison C-4, C-3
Case MAT 3505
Ford M2C134-A, B, C, D
Ford M2C86-B, C
JDM J20A, B, C / J14B, C / J21A
Kubota UDT
MF M1135, M1141, M1143, M1145

Ford/New Holland FNHA-2-C-200.00 (hydraulic oil 134)
Ford/New Holland FNHA-2-C-201.00 (M2C-134D)
Versatile 23M, 24M
Volvo 97303 (VCE WB 101)
ZF TE-ML 03E, 05F, 06D, 06K, 06N, 06R, 17E, 21F

- Good EP properties
- Multi-purpose lubricant
- Very good protection against wear

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Tunneling point °C
2135	10W-30/80W	67	10.0	133	-42	21,500 / -26 °C

Neste UTTO NEX WB2

Fully synthetic hydraulic and driveline oil for construction equipment

Meets or exceeds the following quality criteria:
Volvo 97304 (WB102)
Volvo 97303 (WB101)

- Very good cold properties
- Good wear protection
- Excellent oxidation stability
- Ultimate break chatter control

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Brookfield viscosity -40 °C
2138	40	7,5	157	-45	21000

Neste Gear TO-4 10W

Gearbox oil

Meets or exceeds the following quality criteria:
SAE 10W
API GL-4
API CF
API MT-1

Allison C-4
Caterpillar TO-4, TO-2
Komatsu KES 07.868.1
ZF TE-ML 03C, 07F

- Good oxidation resistance
- Good protection against wear

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2130	10W	37.6	6.2	112	-45	19,200 / -26 °C

Neste Gear TO-4 30

Gearbox oil

Meets or exceeds the following quality criteria:
SAE 30
API GL-4
API CF
API MT-1

Allison C-4
Caterpillar TO-4, TO-2
Komatsu KES 07.868.1
ZF TE-ML 03C, 07F

- Good oxidation resistance
- Good protection against wear

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2131	30	93	11.3	108	-36	24,245 / -26 °C

Neste Premium ATF Multi

Multi vehicle automatic transmission fluid

- Extremely Wide application area
- Extra wide operating temperature area
- Extra good wear protection
- Suitable for long drain intervals

Meets or exceeds the following quality criteria::
ATF:
Audi/Seat/Skoda/VW G 052 025-A2, G 052 055, G 052 162-A2,
G 052 990/A2, G 053 025-A2, G 053 162-A1
Audi/Seat/Skoda/VW G 055 005-A/A1/A2, G 055 025-A2,
G 055 162-A2/A6, G 055 540-A2, G 060 162/A2
Bentley PY112995PA
BMW 81 22 9 400 272, 81 22 9 400 275, 83 22 0 142 516, 83 22 0 24 359, 83 22 0 397 114
BMW 83 22 0 402 413, 83 22 0 403 248, 83 22 0 403 249, 83 22 2 152 426, 83 22 2 289 720
BMW 83 22 7 542 290, 83 22 9 407 765, 83 22 9 407 807
BMW ATF 3.0, ATF 3+, M-1375.4
Caterpillar TO-2
Chrysler/Dodge/Jeep 05127382AA, 68043742AA, 68157995AA
Chrysler/Dodge/Jeep MS 7176 (ATF +), MS 7176D (ATF +2), MS 7176E (ATF +3), MS 9602 (ATF +4)
Daihatsu AMMIX ATF D-II, D-III SP
Ford Mercon, Mercon LV, Mercon SP, Mercon V, FNR5
Ford XL-12, XT-10 QLV, XT-2-QDX (M), XT-2-QSM, XT-5-QM (V), XT-6-DSP (SP), XT-6-QSP, XT-8-QAW, XT-9-QMMF5
Ford 138-CJ, 166-H, 922-A1, 924-A, 938-A/SF
GM 1940700, 2217466, 2217466, 9985010, 9985835, 9986195, 12378515
GM 21005966, 88863400, 88863400, 88863401, 88900925, 93160393, 93165147
GM ATF, Type A, Type A Suffix A, Autotrak II, TASA, MOPAR AS 68 RC (T-IV)
GM Dexron B, II, IID, IIE, III, IIIF, IIIG, IIIH, VI
Honda/Acura ATF-Z1, DW-1, Type 3.0, Type 3.1
Hyundai/Kia 040000C90SG, ATF Red-1K, NWS 9638, SP-II, SP-III, SP-IV, SP-IV M, SP-IV-RR
Isuzu 08200-9001, ATF-II, ATF-III, ATF-SP, SCS Fluid
Jaguar Land Rover 8432, JLM 20292, 21044, 20238, LR0022460, LR023288, TYK500050
MAN 339 Type D, Type F, V-1, V-2, Z-1, Z-2, Z-3
Maserati 231603
Mazda ATF 3317, D-II, F-1, FZ, M-III, M-V, N-1, S-1
MB 236.1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 41, 91, NAG 1, NAG 2
Mitsubishi/Fuso ATF-A4, Diaqueen ATF PA, ATF-MA1, AW, J2, J3, SK, SP-II, SP-III, SP-IV
Nissan Matic Fluid C, D, J, K, S, W
Peugeot/Citroën Z 000169756
Porsche 000 043 205 09, 000 043 205 28, 999 917 547 00 (A2), T-IV, Z 000 169 756
Renault DPO/AL4, Matic D2
Ssang yong DSIH 5M-66
Subaru ATF, ATF 5AT, ATF HP, K0140Y0700
Suzuki AT OIL 5D06, ATF 2326, 2384K, 3314, 3317
Toyota ATF T-III, T-IV, Type T, WS
Volvo 97325, 97335, CE 97340, CE 97341, CE 97342, PN 1161521, PN 1161540, PN 1161640, STD 1273.41

CVT
Audi/Seat/Skoda/VW Multitronic, TL 521 16 (G 052 516), TL 521 80 (G 052 180)
BMW Mini Cooper Mini Cooper 83 22 0 429 154, 83 22 0 136 376, ZF CVT V1
Chrysler/Dodge/Jeep CVT+4, NS-2
Daihatsu AMMIX CVT Fluid DC, DFC, DFE, TC
Ford CFT, CVT 23, CVT 30, M2C199A, M2C928A, M2C933A, Mercon C
GM GM 1940713, 1940714, DEX-CVT, VT40
Honda/Acura CVT, HCF2, Multimatic HMMF (without starting clutch), Z-1 (CVT model, without starting clutch)
Hyundai/Kia CVT-J1, SP-CVT 1, SP III (CVT model), Special CVTY fluid
Mazda JWS 3320
MB 236.20, CVT28
MG Rover EM-CVT
Mitsubishi Diaqueen SP-III (CVT model only), Part # MZ320262
Mitsubishi MMC Diaqueen CVT Fluid J1, MMC Diaqueen CVT Fluid J4, MMC Diaqueen CVT Fluid J4+
Nissan Matic W, N-CVT, NS-1, -2, -2V, -3
Renault Matic CVT
Subaru ECVT, iCVT, iCVT FG, K0425Y0710, NS-2
Subaru Lineartronic CV-30, CVT, CVT II, HT CVT, CVT III
Suzuki CVT Green 1, 1V, 2, CVTF 3320, CVTF TC, NS-2
Toyota/Lexus Fluid TC, Fluid FE
Volvo CVT 4959

Other:
Aisin Warner AW-1, AW-2, JWS 3309, JWS 3314, JWS 3324
Allison C-3, C-4, TES-295, TES-389
Bosch TE-ML 09
JASO M315 1A, 1A-LV, 2A
Samsung SATF-D
Vickers M2950-S, I-286-S
Voith 55.6335.xx (G607), 55.6336.xx (G13636), Service Bulletin #013 and #118
ZF 3, 4, & 6 speed transmissions, 4HP20, 5HP19FL, 5HP20, 5HP24, M-1375.4, S671 090 281
ZF TE-ML 02F, 03D, 04D, 05L, 09, 09X, 11A, 11B, 14A, 14B, 14C, 16L, 17C, 21L
ZF Lifeguardfluid 5, 6, 6+, 8, 9

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Brookfield Viscosity
2166	28	6	159	-42	7770 / -40 °C

Neste ATF-X

Automatic transmission oil

Meets or exceeds the following quality criteria:
Allison C-4
Ford Mercon
GM Dexron III, IIE, IID, II, B
GM ATF Type A Suffix A, Type A
Volvo 97325, 97335, 97340
ZF TE-ML 05L, 09, 11A, 11B

- Reduces friction
- Good protection against wear
- Particularly wide operating temperature range

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cP/°C
2162	37	7.7	183	-51	16,000 / -40 °C


17
17
17

Hydraulic oils

Hydraulics in nowadays are found almost in all machinery and vehicles used in land construction, forestry, construction or moving and transporting goods. Many earthmovers, diggers, forest machines, etc. are fully hydraulic and almost all trucks have a hydraulic lift, skip, bogie hoist or, at the very least, power steering.

The oil used in a hydraulic system must have the right viscosity, right additives, it must be clean and water-free and it must be uncontaminated by oxidation. Some hydraulics manuals say that up 90% of damage to hydraulics are caused by the oil used. Damages may also be caused by other reasons. These include water, dirt or even sand that has gotten into the oil. Also, the wrong type of topping up oil or neglecting the periodic change of oil and filters may cause serious damage. Carefully following the manufacturer's instructions ensures the long life and flawless operation of a hydraulic system.

Hydraulic equipment manufacturers determine performance according to various standards. Standards in various countries are very much alike.

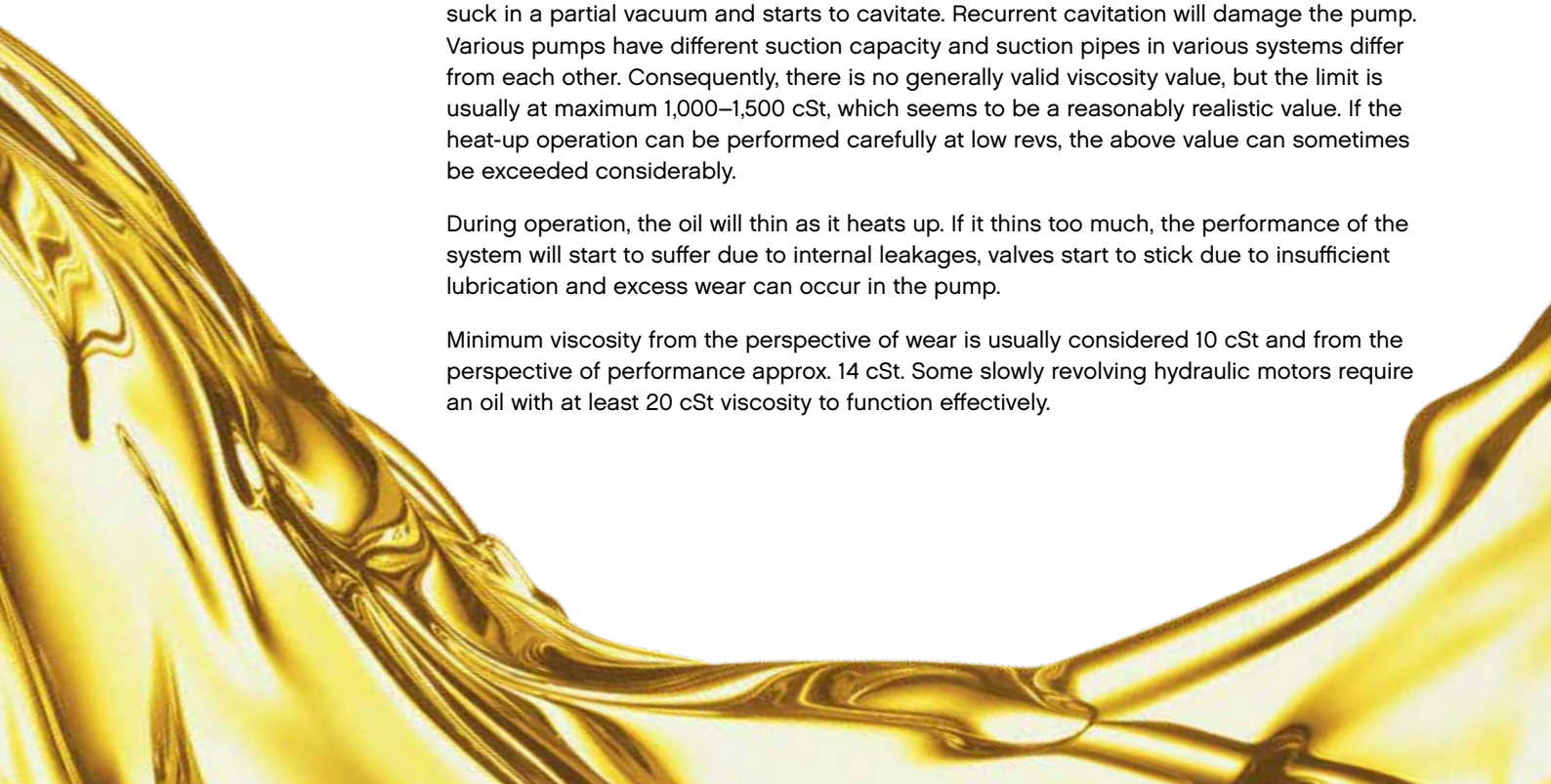
Approximate comparison of most well-known hydraulic oil classifications (DIN, ISO, SS)

Hydraulic use	**DIN 51524 Part 1 = HL Part 2 = HLP Part 3 = HVLP**	**ISO 6743-4 HV HM HL**	**SS 155434**	**Oil additives, performance**
Modern hydraulics used outside, e.g. vehicles year around Pressure > 100 bar	HVLP	HV	AV	Corrosion, oxidation and wear prevention + enhancers of the viscosity index (VI) VI >= 140
Modern hydraulics operated indoors Pressure > 100 bar	HLP	HM	AM	Corrosion, oxidation and wear prevention VI >= 90
Old, simple systems. Indoor use Pressure < 100 bar	HL	HL	-	Corrosion and oxidation prevention VI >= 70

The correct viscosity for the operating temperature range is possibly the most important property of a hydraulic oil. This is emphasized in outdoor use due to the fluctuating temperature, which is why most oils for outdoor use are multigrade oils. On start-up, oil must flow through the suction pipes to the pump fast enough. If the flow is too slow, the pump will suck in a partial vacuum and starts to cavitate. Recurrent cavitation will damage the pump. Various pumps have different suction capacity and suction pipes in various systems differ from each other. Consequently, there is no generally valid viscosity value, but the limit is usually at maximum 1,000–1,500 cSt, which seems to be a reasonably realistic value. If the heat-up operation can be performed carefully at low revs, the above value can sometimes be exceeded considerably.

During operation, the oil will thin as it heats up. If it thins too much, the performance of the system will start to suffer due to internal leakages, valves start to stick due to insufficient lubrication and excess wear can occur in the pump.

Minimum viscosity from the perspective of wear is usually considered 10 cSt and from the perspective of performance approx. 14 cSt. Some slowly revolving hydraulic motors require an oil with at least 20 cSt viscosity to function effectively.



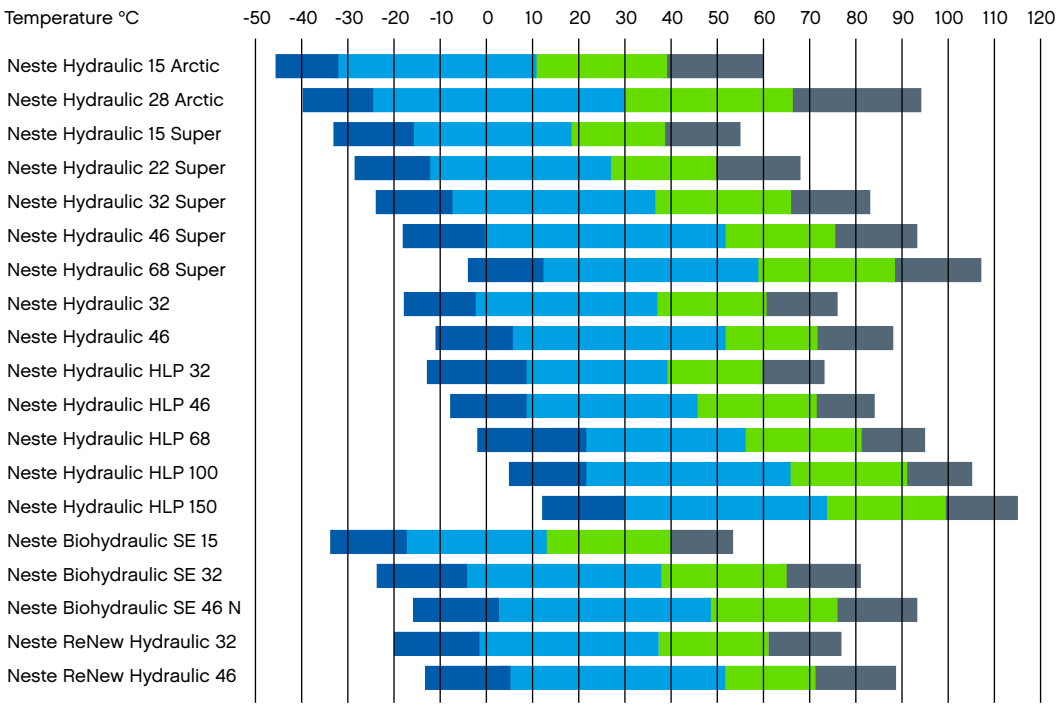
Optimum viscosity

The best viscosity range for continuous operation is approx. 16 to 36 cSt. This will ensure that internal leakage does not occur, which means that the system performance is good, lubrication capability is good and prevents the wear of parts, and the thickness of the oil does not yet cause extra flow resistance.

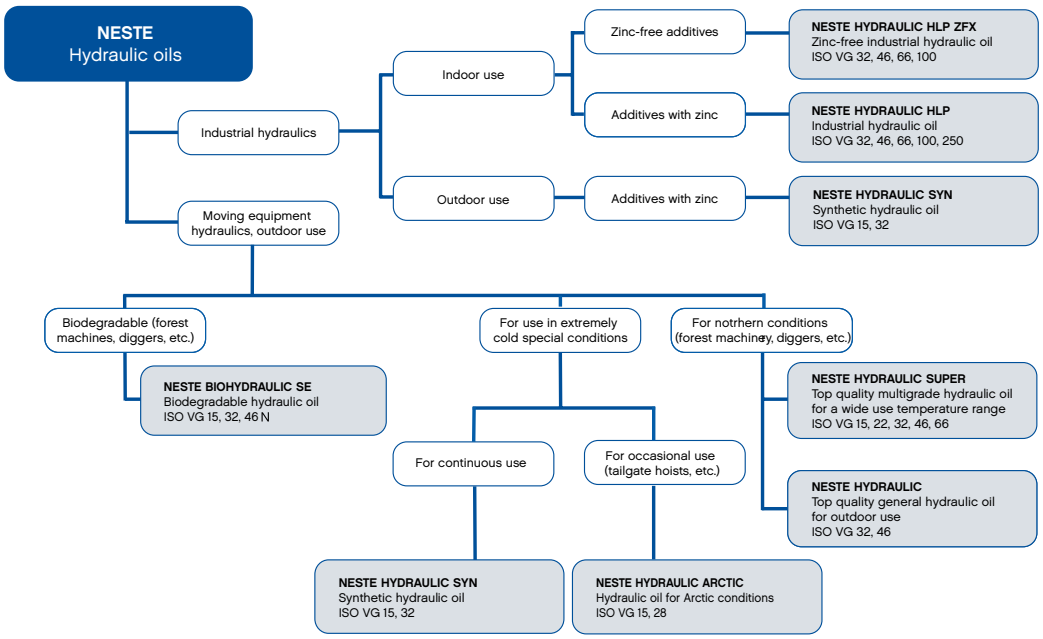
Typical temperature ranges

- The lowest allowed operating temperature for a displacement pump (corresponds to viscosity 300–1,000 cSt*)
- The lowest allowed operating temperature for a gear pump (corresponds to viscosity 36–300 cSt*)
- Optimal operating temperature (corresponds to viscosity 16–36 cSt*)
- Highest allowed operating temperature (corresponds to viscosity 10–16 cSt*)

*Viscosity limits are indicative. Check the values recommended by the hydraulics manufacturer.



Selection chart for hydraulic oils



Vehicle hydraulic oils

Neste Hydraulic 15 Arctic

Hydraulic oil for arctic conditions

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
AFNOR NFE 48-603, NFE 48-690/1

- Particularly wide operating temperature range
- Extremely good performance at low temperatures
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -30 °C
2615	15	15	5	305	-60	415

Neste Hydraulic 28 Arctic

Hydraulic oil for arctic conditions

Meets or exceeds the following quality criteria:
AFNOR NFE 48-603, NFE 48-690/1
DIN 51524 part 3 HVLP
ISO 11158 HV

- Particularly wide operating temperature range
- Extremely good performance at low temperatures
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -30 °C
2616	28	28	8.7	309	-57	975

Neste Hydraulic 15 Super

Super grade hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV

- Very wide operating temperature range
- Excellent protection against wear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2625	15	15	4	179	-51	565

Neste Hydraulic 22 Super

Super grade hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV

- Very wide operating temperature range
- Excellent protection against wear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2626	22	22	5.1	168	-54	665

Neste Hydraulic 32 Super

Super grade hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
AFNOR NFE 48-603, NFE 48-690/1
Cincinnati Milacron P-68

Denison HF-0, HF-1, HF-2 (2003)
Eaton Vickers I-286-S, M-2950-S
SS 15 54 34 AV

- Very wide operating temperature range
- Excellent protection against wear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2627	32	32	7.2	200	-45	1,100

Neste Hydraulic 46 Super

Super grade hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
AFNOR NFE 48-603,
NFE 48-690/1

Cincinnati Milacron P-70
Denison HF-0, HF-1, HF-2 (2003)
Eaton Vickers I-286-S, M-2950-S
SS 15 54 34 AV

- Very wide operating temperature range
- Excellent protection against wear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2628	46	46	9.3	190	-45	2,150

Neste Hydraulic 68 Super

Super grade hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
AFNOR NFE 48-603, NFE 48-690/1
Cincinnati Milacron P-69

Denison HF-0, HF-1, HF-2 (2003)
Eaton Vickers I-286-S, M-2950-S
SS 15 54 34 AV

- Very wide operating temperature range
- Excellent protection against wear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2629	68	68	11.4	163	-42	4,930

Neste Hydraulic 32

Hydraulic oil for outdoor use

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP

Eaton Vickers I-286-S, M-2950-S
ISO 11158 HV
SS 15 54 34 AV

- Wide operating temperature range
- Very low shear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2635	32	32	6.32	144	-42	1,490

Neste Hydraulic 46

Hydraulic oil for outdoor use

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP

Eaton Vickers I-286-S, M-2950-S
ISO 11158 HV
SS 15 54 34 AV

- Wide operating temperature range
- Very low shear
- Efficient protection against corrosion

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C
2636	46	46	8	146	-39	3,010

Synthetic hydraulic oils

Neste Hydraulic SYN 32

Synthetic hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV

- Very wide operating temperature range
- Excellent shear resistance
- Excellent oxidation resistance
- Efficient protection against wear

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Cold viscosity cSt -30 °C
2588	32	32	6.5	167	-54	2,550

Neste Biohydraulic SE 15

Biodegradable hydraulic oil

Meets or exceeds the following quality criteria:
ISO 15380 L-HEES
SS 15 54 34 BV Miljöanpassad

- Environmentally friendly
- Very good performance at low temperatures
- Excellent lubricating properties

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2602	15	15	3.8	155	-51

Neste Biohydraulic SE 32

Biodegradable hydraulic oil

Meets or exceeds the following quality criteria:
ISO 15380 L-HEES
SS 15 54 34 BV Miljöanpassad

- Environmentally friendly
- Very wide operating temperature range
- Excellent lubricating properties

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2603	32	32	7.1	193	-49

Neste Biohydraulic SE 46

Biodegradable hydraulic oil

Meets or exceeds the following quality criteria:
ISO 15380 L-HEES
SS 15 54 34 BV Miljöanpassad

- Environmentally friendly
- Very wide operating temperature range
- Excellent lubricating properties

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2604	46	44,9	9.4	186	-51

Industrial hydraulic oils

Neste Hydraulic HLP 32

Industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 HLP
DIN 51524 HL
ISO 6743: ISO-L-HM

Cincinnati Machine P-68,
Denison HF-0, HF-1, HF-2
Vickers I-286-S, M-2950-S

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2555	32	32	5.5	105	-33

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- No thinning during use

Neste Hydraulic HLP 46

Industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 HLP
DIN 51524 HL

ISO 6743: ISO-L-HM
Cincinnati Machine P-70,
Denison HF-0, HF-1, HF-2
Vickers I-286-S, M-2950-S

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2556	46	46	6.81	104	-30

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- No thinning during use

Neste Hydraulic HLP 68

Industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 HLP
DIN 51524 HL

ISO 6743: ISO-L-HM
Cincinnati Machine P-69,
Denison HF-0, HF-1, HF-2
Vickers I-286-S, M-2950-S

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2557	68	68	8.9	102	-27

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- No thinning during use

Neste Hydraulic HLP 100

Industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 HL
DIN 51524 HLP

ISO 6743: ISO-L-HM
Denison HF-0, HF-1, HF-2
Vickers I-286-S, M-2950-S

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2558	100	100	11.4	99	-27

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- No thinning during use

Neste Hydraulic HLP 150

Industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 HL
DIN 51524 HLP

ISO 6743: ISO-L-HM
Denison HF-0, HF-1, HF-2
Vickers I-286-S, M-2950-S

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2559	150	150	15.7	108	-27

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- No thinning during use

Neste Hydraulic HLP ZFX 32

Zinc-free industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 2, HLP
ISO 11158 HL, HM
Denison HF-0, HF-1, HF-2

Vickers (Eaton) I-286-S
Vickers (Eaton) M-2950-S
Cincinnati Machine P-68
Bosch Rexroth RE 90 220
DIN 51506 VDL

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2565	32	32	5.4	102	-33

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- Zinc-free additives

Neste Hydraulic HLP ZFX 46

Zinc-free industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 2, HLP
ISO 11158 HL, HM
Denison HF-0, HF-1, HF-2

Vickers (Eaton) I-286-S
Vickers (Eaton) M-2950-S
Cincinnati Machine P-70
Bosch Rexroth RE 90 220
DIN 51506 VDL

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2566	46	46	6.8	104	-27

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- Zinc-free additives

Neste Hydraulic HLP ZFX 68

Zinc-free industrial hydraulic oil

Meets or exceeds the following quality criteria:
DIN 51524 part 2, HLP
ISO 11158 HL, HM
Denison HF-0, HF-1, HF-2

Vickers (Eaton) I-286-S
Vickers (Eaton) M-2950-S
Cincinnati Machine P-69
Bosch Rexroth RE 90 220
DIN 51506 VDL

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2567	68	68	8.9	102	-27

- Efficient protection against wear
- Good corrosion protection
- Good oxidation resistance
- Zinc-free additives

Neste ReNew hydraulic oils

Neste ReNew Hydraulic 32

Hydraulic oil from re-refined base oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
Eaton Vickers I-286-S, M-2950-S
SS 15 54 34 AV

- Circular economy product
- Broad operating temperature area
- Very good shear stability
- Good anti wear properties

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2643	32	32	6.3	152	-45

Neste ReNew Hydraulic 46

Hydraulic oil from re-refined base oil

Meets or exceeds the following quality criteria:
DIN 51524 part 3 HVLP
ISO 11158 HV
Eaton Vickers I-286-S, M-2950-S
SS 15 54 34 AV

- Circular economy product
- Broad operating temperature area
- Very good shear stability
- Good anti wear properties

Product number	ISO VG	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2644	46	46	8.1	151	-39

Lubricating greases

Lubricating greases are mineral and synthetic oils thickened with various thickeners and soaps. In addition, lubricating greases may contain various additives to improve their lubricating and EP properties as well as corrosion prevention.

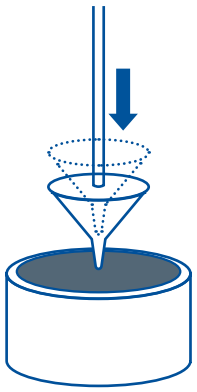
Depending on the demands of the lubrication target, you may choose a lubricating grease with optimal operating temperature, lubricating properties and penetration/viscosity.

Neste lubricating greases are lithium and calcium -based greases containing complex thickeners covering even demanding use targets in traffic and industry.

Penetration

The hardness of a lubricating grease is determined with a test where a metal cone is left to freely sink into the grease at a standard temperature (25 °C) after which the result is given in tenths of a millimeter. The higher the NLGI number a grease has, the thicker the grease.

NLGI number	Penetration limits
000	445–475
00	400–430
0	355–385
1	310–340
2	265–295
3	220–250
4	175–205
5	130–160
6	84–115



Thickeners

The performance of a lubricating grease depends on the common effect of base oil and additives as well as on the properties of the thickener chosen. Typical properties of thickeners:

Lithium

- excellent mechanical resistance
- fair water resistance
- good temperature resistance

Lithium complex

- excellent mechanical resistance
- good water resistance
- good temperature resistance
- suitable for long maintenance intervals

Calcium (water-free)

- excellent mechanical resistance
- good water resistance
- average temperature resistance

Miscibility

	Lithium	Lithium complex	Calcium	Calcium complex	Sodium
Lithium		Yes	Yes	No	No
Lithium complex	Yes		No	No	No
Calcium	Yes	No		No	No
Calcium complex	No	No	No		No
Sodium	No	No	No	No	

Neste Superlix EP 2

High-quality lubricating grease for vehicles

Meets or exceeds the following quality criteria:
DIN 51502: KP2N-30
ISO 12924: ISO-L-XC(F)DIB2
VOLVO Std 1277.2
NLGI GC-LB

- Good temperature resistance
- Excellent mechanical resistance
- High drop point
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7253	2	Lithium complex	>260	-30... +140	210

Neste OH Grease 2

Special grease for the joint studs of work machinery and vehicles

Meets or exceeds the following quality criteria:
DIN 51502: KP2K-30
ISO 12924: ISO-L-XC(F)CIB2

- Excellent adhesion
- Good wear resistance and EP properties
- Good resistance to impact loads
- Excellent water resistance

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7032	2	Anhydrous calcium	>140	-30... +120	1,350

Neste OH Grease 0

Special grease for the joint studs of work machinery and vehicles

Meets or exceeds the following quality criteria:
DIN 51502: KP0K-40
ISO 12924: ISO-L-XD(F)CHB0

- Excellent adhesion
- Excellent pumpability even in winter
- Good resistance to impact loads
- Excellent water resistance

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7030	0	Anhydrous calcium	>120	-40... +120	1,350

Neste Allrex WR EP 2

Water resistant universal grease

Meets or exceeds the following quality criteria:
ISO 12924: ISO-L-XC(F)CIB2
NLGI 2
DIN 51502: KP2K-30

- Excellent water resistance
- Good anti-wear and EP properties
- Very good protection against corrosion
- Multipurpose

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7034	2	Anhydrous calcium	>140	-30... +120	220

Neste Center Grease 00 EP

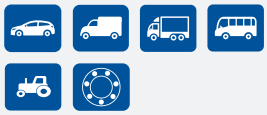
Grease for central lubrication systems

Meets or exceeds the following quality criteria:
DIN 51502: KP00G-40
ISO 12924: ISO-L-XD(F)BIB00

- Excellent pumpability
- Good performance at low temperatures
- Good wear resistance and EP properties
- Good rust prevention properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7410	00	Lithium complex	>170	-40... +100	120

Neste MP Grease



General lubricating grease for vehicles

Meets or exceeds the following quality criteria:
DIN 51502: KP2K-30
ISO 12924: ISO-L-XC(F)CHB2

- Multi-purpose grease
- Good wear resistance and EP properties
- Good rust protection
- Good adhesion on metal surfaces

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7010	2	Lithium	>180	-30... +120	110

Neste Molygrease

Lithium-based special grease containing molybdenum sulfide

Meets or exceeds the following quality criteria:
DIN 51502: KPF2K-30
ISO 12924: ISO-L-XC(F)CHB2

- Withstands impact loads
- Good wear resistance and EP properties
- Excellent rust protection
- Withstands mechanical stress

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7025	2	Lithium	>180	-30... +120	110

Neste Allrex EP 0

Grease for general use

Meets or exceeds the following quality criteria:
DIN 51502: KP0K-30
ISO 12924: ISO-L-XC(F)CIB0

- Multi-purpose
- Good pumpability
- Good rust prevention properties
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7020	0	Lithium	>160	-30... +120	200

Neste Allrex EP 1

Grease for general use

Meets or exceeds the following quality criteria:
DIN 51502: KP1K-30
ISO 6743: ISO-L-XCCFB1

- Multi-purpose
- Good pumpability
- Good rust prevention properties
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7021	1	Lithium	>180	-30... +120	200

Neste Allrex EP 2

Grease for general use

Meets or exceeds the following quality criteria:
DIN 51502: KP2K-30
ISO 6743: ISO-L-XCCIB2
MAN 283 Li-P 2
MB Blatt 267.0
VOLVO Std 1277.18

- Multi-purpose
- Good pumpability
- Good rust prevention properties
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7022	2	Lithium	>180	-30... +120	200

Neste Allrex EP 3

Grease for general use

Meets or exceeds the following quality criteria:
DIN 51502: KP2.5K-30
ISO 6743: ISO-L-XCCIB2.5
Volvo Std 97718

- Multi-purpose
- Good mechanical resistance
- Good rust prevention properties
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7023	2.5	Lithium	>180	-30... +130	205

Neste Superlix EM

Special grease for rolling bearings

ISO 6743: ISO-L-XCDHB2
NLGI 2
DIN 51502: KP2N-30

- Good high temperature performance
- Excellent mechanical stability
- Good load carrying capability
- Good protection against corrosion

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7037	2	Lithium complex	>260	-30... +140	110

Neste Templex

High temperature grease

Meets or exceeds the following quality criteria:
DIN 51502: KP1.5N-30
ISO 12924: ISO-L-XC(F)DIB1.5

- Wide operating temperature range
- Good wear resistance and EP properties
- Withstands impact loads
- Good corrosion protection

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7013	1.5	Lithium complex	>260	-30... +140	560

Neste Allrex EP M3

Special grease containing Molybdenum disulfile

ISO 6743: ISO-L-XCCIB2
NLGI 2
DIN 51502: KPF2K-30
MAN 285 Li-PF 2

- Good mechanical stability
- Extremely good load carrying capability
- Good protection against corrosion
- Multipurpose

Product number	NLGI hardness	Thickener type	Drop poin °C	Operating temperature range °C	Base oil viscosity cSt
7033	2	Lithium	>180	-30... +120	200

Neste HD Grease Arctic M5

Molybdenum Disulphide containing special grease for cold climate

Meets or exceeds the following quality criteria:
DIN 51502: OGFP0G-50
ISO 12924: L-XE(F)BIB0

- Excellent load carrying capacity
- Excellent pumpability in cold climate
- Very good water resistance
- Good corrosion protection

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7036	0	Lithium-calcium complex	>260	-50... +90	46

Neste HD Grease M5

Molybdenum Disulphide containing special grease

Meets or exceeds the following quality criteria:
DIN 51502: KPF2K-20
ISO 12924: L-XB(F)CHB3

- Excellent load carrying capacity
- Effective against impactive loads
- Very good water resistance
- Good corrosion protection

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7011	2	Lithium complex	>240	-20... +120	460

Neste Synlix

Fully synthetic lubricating grease

Meets or exceeds the following quality criteria:
DIN 51502: KPHC1.5N-40
ISO 6743: ISO-L-XDDIB1.5

- Very wide operating temperature range
- Excellent mechanical resistance
- Good corrosion protection
- Good load-bearing ability

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7018	1.5	Lithium complex	>260	-40... +150	160

Neste Synlix LT

Fully synthetic special grease

Meets or exceeds the following quality criteria:
DIN 51502: KPHC2K-55
ISO 6743: ISO-L-XECIB2.0

- Excellent performance at low temperatures
- Suitable for high RPM
- Good wear resistance and EP properties
- Good corrosion protection

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7019	2	Lithium complex	>260	-55... +120	45

Neste Avora

Grease for open gears

Meets or exceeds the following quality criteria:
DIN 51502: OGP0.5N-20
ISO 12924: ISO-L-XB(F)DIB0.5

- Easy to apply
- Excellent corrosion protection
- Excellent water resistance
- Good wear resistance and EP properties

Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7110	0.5	Calcium/lithium complex	>260	-20… +140	850

Neste Avora Spray

Sprayable grease for open gears

Meets or exceeds the following quality criteria:
DIN 51502: OGP0.5N-20
ISO 12924: ISO-L-XB(F)DIB0.5

- Easy to apply
- Excellent corrosion protection
- Excellent water resistance
- Good wear resistance and EP properties

Product number
7111

Neste Contrex

Protective grease for electrical connectors

Meets or exceeds the following quality criteria:
DIN 51502: K2K-30
ISO 6743: ISO-L-XCCHA2

- Good oxidation resistance
- Excellent corrosion protection

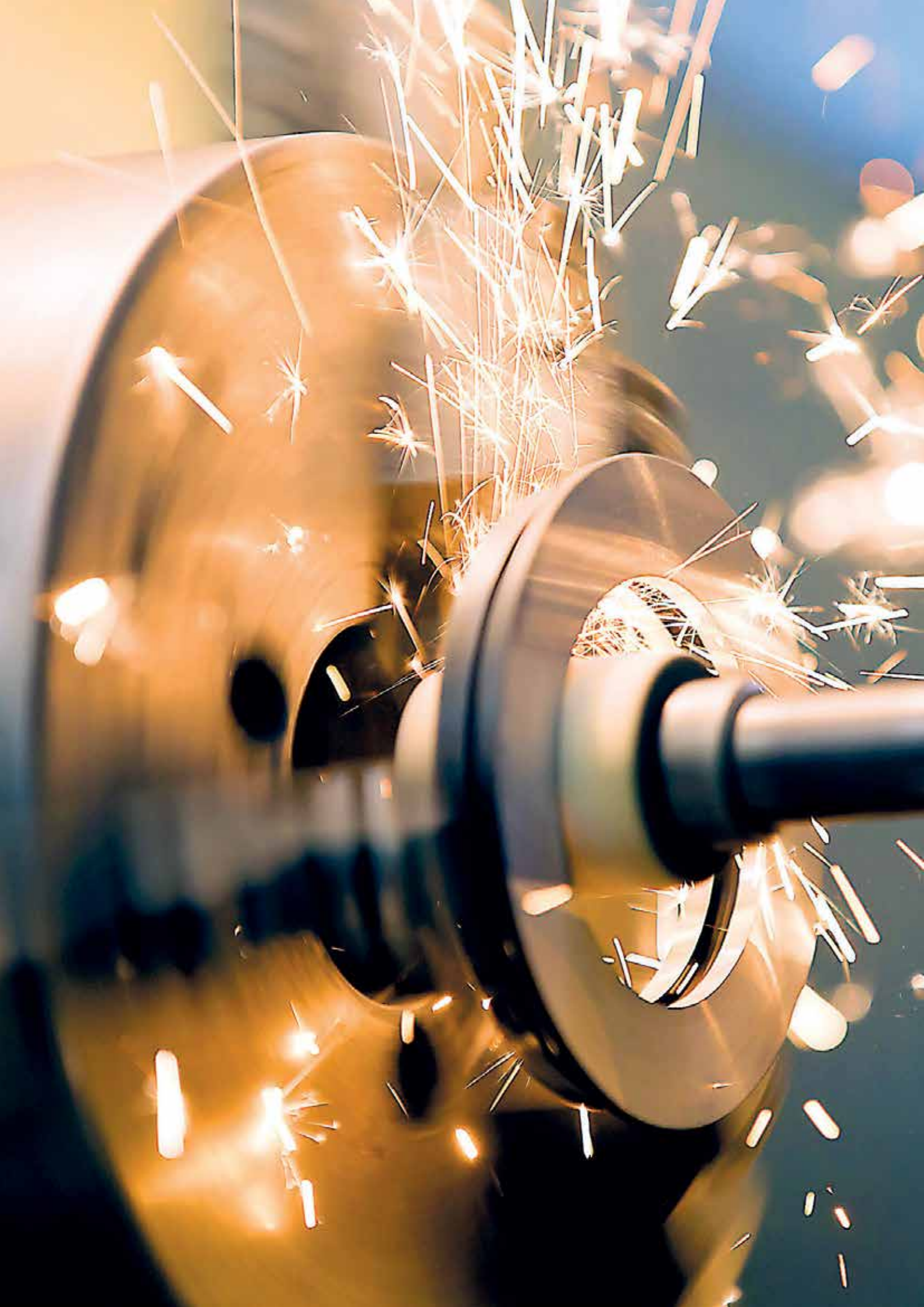
Product number	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7014	2	Lithium	>180	-30… +110	110

Neste Keidi S

Lubricant for gang saw guides

- Easy to apply
- Suitable for lubricator use
- For summer use

Product number	Viscosity mm^2/s (cSt) 40 °C	100 °C
7156	280	11.5



Industrial lubricants

Important to take into account when choosing a lubricant

- Equipment manufacturer's recommendations
- Operating temperature / its fluctuations
- Viscosity
- Load and/or pressure
- Running speed / speed of rotation
- Lubrication method / lubrication system
- System volume
- Nature/Environment/User

Also pay attention to

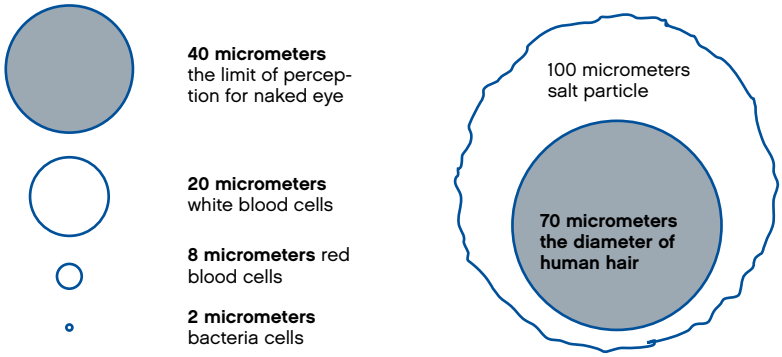
- Whether the oil system has been properly emptied
- Oil filtering when topping up
- Be careful not to over- or under-fil the system
- Using the right product
- Impurities, contamination
- Do not forget to check/change oil filters
- Breather air filter
- Entry of water into the system, draining
- Regular monitoring of oil condition
- Leaking seals / condition of seals

Oil purity

The importance of purity to lubricant system cannot be overstated. Even a small amount imperceptible dirt may paralyze even a large system and cause costly repairs. Free play in, for example, pumps and valves may be approx. 1 to 15 µm (thousandths of millimeter), which means that hard dirt particles the size of free play, for example sand dust (silicon) or metal particles are the worst. They may jam the valves when getting lodged in the free play and by scraping precision mechanical metal surfaces. The following table presents typical free play found in lubrication systems.

Component type	Free play micrometers
Gear pump	
gear tip – housing	0.5–5
gear – side plate	1–1
Vane pump	
vane tip – ring	–1
vane – side plate	10–30
Displacement pump	
piston – cylinder	10–30
baffle plate – cylinder group	
Directional control valve	
high pressure	2–10
low pressure	10–30

The figure below shows particle sizes drawn in the same scale. The worst particles from the perspective of a lubrication system are hard 1 to 20 micron particles invisible to the naked eye.

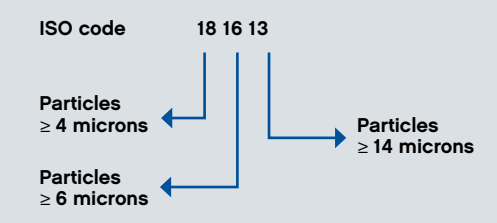


Entry of dirt, for example, in circulation lubrication or hydraulic system is prevented by flushing it before commissioning with new filtered hydraulic oil. If possible, the system is filled through its own filters or a separate filter unit. All maintenance and repair work must be performed in clean and dust-free facilities. Opened parts of the system must be carefully covered from outside dirt and dust. However, dirt will accumulate in the system during running no matter how well it is covered. For example, hydraulic cylinder arms bring in outside impurities through the seals. The 'natural' wear of the system creates metallic particles and fine-grained dirt causes "sand-blasting-like" wear when it, for example, hits the walls at pipe turns and spindle edges at a fast speed. Therefore, it is important to remove dirt continuously to retain sufficient cleanliness level.

In order to remove dirt, it is necessary to use appropriate filters and ensure that they are in good condition. Instructions are provided by the equipment manufacturer. The container's breather vent must have as fine of filter as the main filters of the system. During oil change, the sediment collected at the bottom of the container will be removed if it is possible. When needed, the whole system will be flushed with oil normally used in the system.

ISO 4406 method will be used for indicating the purity of the lubricating oil. The classification is based on calculating the number of particles included in an oil sample, either by a microscope or an automatic counter. In the ISO method, particles are divided in three different size groups; ≥ 4 µm, ≥ 6 µm and ≥ 14 µm.

Number	Microns	Number of particles (per ml)
18	≥ 4	1,300–2,500
16	≥ 6	320–640
13	≥ 14	40–80



Oil condition monitoring

Monitoring the condition of oil is a crucial part of securing the operation of production equipment and the more critical the monitoring target is, the more important it is. Condition of lubrication systems is monitored with oil analyses, which provide information about the condition of the system. Preventive maintenance measures can be undertaken immediately during production turnarounds. Regular oil analysis prevents unmanaged turnarounds.

The location of our technology center in Finland gives us good opportunities to provide fast service that takes the needs of industry into account.

Circulation lubrication

Circulation lubrication systems are used when a large number of bearings and gears are to be lubricated in a centralized manner. Circulation lubrication is also capable of handling the cooling of lubrication targets. In addition, it gives the opportunity to control the oil condition well.

Circulation lubrication is most typically used in forest industry (paper, carton and pulp machines, thermomechanical pulp refiners, sanders, rollers, etc.). Turbines and steel industry use large-scale circulation lubrication systems. Printing presses are also circulation-lubricated.

Viscosity of the circulation lubrication oil plays the decisive role in the service life of bearings. The rule of thumb is: the lower the running speed, the higher the viscosity of lubricant in the bearings.

A great deal is demanded from the oil in circulation lubrication, since the system needs to function at varying temperatures and remove outside impurities such as wear particles, oxidation products, water and air bubbles.

Circulation lubrication oil must have good anti-corrosive properties. For example, ASTM D665 -test B, which is performed with synthetic salt water, provides a good understanding of an oil's capability to protect lubricated surfaces from rust.

The time spent on air release is mostly affected by the oil viscosity. Additives used also have a role but not as significant as viscosity. When put under pressure air in the oil may cause cavitation in the pump and pressure strikes in the pipes. Moreover, bearings do not have an oil film at the air bubble. For this reason, good air release properties and selection of the right viscosity class are crucial.

Foaming of oil is different from air in the oil. When oil foams, the difference between foam and clear oil is clearly visible, whereas oil containing air is cloudy. Circulation lubrication oils have effective foam prevention additives, which work even in small doses.

The separation time of oil and water is crucially affected by oil density. The closer the oil density to water density, the worse the separation of oil and water. If a container has been measured large enough, water will sink to the bottom of the container. The thinner the oil, the more effective the separation.

A circulation lubrication system must be flushed before commissioning. Thin mineral or synthetic oils are usually used as purging oils, for example, products in Neste Circlube series are well suited for system flushing.

Classifications of industrial lubricants

At international level

- ISO

National standardization organizations, such as

- ASTM (USA)
- DIN (GERMANY)
- BSS (UNITED KINGDOM)
- AFNOR (FRANCE)
- SS (SWEDEN)

Many large equipment manufacturers also set their own quality and performance requirements (specifications). E.g.

- SKF (Bearings)
- FAG (Bearings)
- Parker Denison (Hydraulics)
- EATON VICKERS (Hydraulics)
- Bosch Rexroth (Hydraulics)
- DAVID BROWN (Gears)
- Flender (Gears)
- CINCINNATI MILACRON (Hydraulics)

In addition, some industrial organizations have prepared their own standards and set quality/performance requirements for lubricants, including

- AGMA (American transmission manufacturers)
- US STEEL
- GERMAN STEEL INDUSTRY
- VDMA (German equipment manufacturers)

Turbine oils

Neste Turbine 32

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51515- L-TD
ISO-L-TGA 32

- Excellent rust prevention properties
- Good oxidation resistance
- Good air separation ability
- Good water separation ability

Product number	ISO VG class	ISO-L-TGA class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3084	32	32	32	5.2	102	-33

Neste Turbine 46

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51515- L-TD
ISO-L-TGA 46

- Excellent rust prevention properties
- Good oxidation resistance
- Good air separation ability
- Good water separation ability

Product number	ISO VG class	ISO-L-TGA class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3085	46	46	46	6.8	101	-33

Neste Turbine 68

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51515- L-TD
ISO-L-TGA 68

- Excellent rust prevention properties
- Oxy Good oxidation resistance
- Good air separation ability
- Good water separation ability

Product number	ISO VG class	ISO-L-TGA class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3086	68	68	68	8.8	101	-30

Neste Turbine GT 32

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 32
SIEMENS TLV 901304-01
GEK 32 568 F
GEK 107395
GEK 101941 A
BS 489

- Oxy Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Good water and air separation

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3096	32	23	32	5.8	127	-12

Neste Turbine GT 46

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 46
SIEMENS TLV 901304-01
BS 489

- Oxy Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Good water and air separation

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3097	46	46	46	7.8	138	-24

Neste Turbine GT 68

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 68
BS 489

- Oxy Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Good water and air separation

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3098	68	68	68	10.7	147	-33

Neste Turbine GT 32 EP

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 32

SIEMENS TLV 901304-01
GEK 32 568 F
GEK 107395
GEK 101941 A
BS 489

- Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Suitable for turbines with a reduction gear

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3093	32	32	32	5.8	127	-12

Neste Turbine GT 46 EP

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 46
SIEMENS TLV 901304-01
BS 489

- Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Suitable for turbines with a reduction gear

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3094	46	46	46	7.8	138	-24

Neste Turbine GT 68 EP

Turbine oil

Meets or exceeds the following quality criteria:
DIN 51 515 - L-TD
DIN 51 524 - HL
ISO-L-TGE 68
BS 489

- Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Suitable for turbines with a reduction gear

Product number	ISO VG class	ISO-L-TGE class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3095	68	68	68	10.7	147	-33

Neste Turbine Hydro 46

Lubrication oil for water turbines

- Excellent oxidation resistance
- Excellent rust protection
- High viscosity index
- Long service life

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3081	46	49	7.9	130	-39

Neste Paper Mill 150 D

Oil for paper machines

Meets or exceeds the following quality criteria:
DIN 51524-2 (HLP)
DIN 51517-2 (CL)

- Good protection against wear
- Excellent rust prevention properties
- Good water separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2980	150	150	14.7	97	-12

Neste Paper Mill 220 D

Oil for paper machines

Meets or exceeds the following quality criteria:
DIN 51517-2 (CL)

- Good protection against wear
- Excellent rust prevention properties
- Good water separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2981	220	220	18.9	96	-12

Neste Beta 68 ZFX

Zinc-free paper machine oil

Meets or exceeds the following quality criteria:
DIN 51524-2 (HLP)
RAU4L 00659.D
DIN 51517-2 (CL)

- Excellent wear resistance
- Excellent corrosion resistance
- Excellent water and air separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3031	68	68	8.9	101	-21

Neste Beta 100 ZFX

Zinc-free paper machine oil

Meets or exceeds the following quality criteria:
DIN 51524-2 (HLP)
RAU4L 00659.D
DIN 51517-2 (CL)

- Excellent wear resistance
- Excellent corrosion resistance
- Excellent water and air separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3032	100	100	11.3	97	-18

Neste Beta 150 ZFX

Zinc-free paper machine oil

Meets or exceeds the following quality criteria:
DIN 51524-2 (HLP)
RAU4L 00659.D
METSO SOLID-TELA

- Excellent wear resistance
- Excellent corrosion resistance
- Excellent water and air separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3033	150	150	14.7	95	-12

Neste Beta 220 ZFX

Zinc-free paper machine oil

Meets or exceeds the following quality criteria:
DIN 51517-2 CL
RAUAH 00925
RAU4L 00659.D

METSO SOLID-TELA
SKF Dryer section specification ver. 2
VOITH VN 108 (2004)

- Excellent wear resistance
- Excellent corrosion resistance
- Excellent water and air separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3034	220	220	19.2	96	-12

Neste Beta 460 ZFX

Zinc-free paper machine oil

Meets or exceeds the following quality criteria:
DIN 51517-2 CL
RAU4L 00659.D

- Excellent wear resistance
- Excellent corrosion resistance
- Excellent water and air separation
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3036	460	460	30.9	97	-12

Neste Lamda 68 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3043	68	68	10.4	140	-57

Neste Lamda 100 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3052	100	100	14.3	149	-51

Neste Lamda 150 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3053	150	150	20.2	156	-51

Neste Lamda 220 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3064	220	220	27.7	162	-51

Neste Lamda 320 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3076	320	320	37.4	165	-42

Neste Lamda 460 ZF

Synthetic paper machine oil

- Long service life
- Excellent oxidation and temperature resistance
- Wide operating temperature range
- Excellent rust protection

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3077	460	460	50.7	173	-39

Circulation lubrication and machine oils

Neste Circlube 22

Circulation lubrication oil

Meets or exceeds the following quality criteria:
ISO-L-AN 22

- Good oxidation resistance
- Ashless
- Good water and air separation

Product number	ISO VG class	ISO-L-AN class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3310	22	22	22	4.5	118	-39

Neste Circlube 68

Circulation lubrication oil

Meets or exceeds the following quality criteria:
ISO-L-AN 68

- Good oxidation resistance
- Ashless
- Good water and air separation

Product number	ISO VG class	ISO-L-AN class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3320	68	68	68	8.8	102	-30

Neste Circlube 150

Circulation lubrication oil

Meets or exceeds the following quality criteria:
ISO-L-AN 150

- Good oxidation resistance
- Ashless
- Good water and air separation

Product number	ISO VG class	ISO-L-AN class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3330	150	150	150	14.8	98	-33

Neste Circlube 320

Circulation lubrication oil

Meets or exceeds the following quality criteria:
ISO-L-AN 320

- Good oxidation resistance
- Ashless
- Good water and air separation

Product number	ISO VG class	ISO-L-AN class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3340	320	320	320	23	96	-18

Spindle bearing oils

Neste Spindle 10

Spindle bearing oil

Meets or exceeds the following quality criteria:
ISO VG 10

- Good protection against wear
- Excellent rust prevention properties
- Good oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3395	10	10	2.7	114	-48

Industrial gearbox oils

Neste Industrial Gear 68 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)

ISO-L-CKC 68
AGMA 9005-E02 2 EP
David Brown 2EP

- Excellent EP properties
- Good corrosion protection
- Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3410	68	68	8.8	102	-33

Neste Industrial Gear 100 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)

ISO-L-CKC 100
AGMA 9005-E02 3 EP
David Brown 3EP

- Excellent EP properties
- Good corrosion protection
- Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3421	100	100	11.4	100	-30

Neste Industrial Gear 150 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)

ISO-L-CKC 150
AGMA 9005-E02 4 EP
David Brown 4EP

- Excellent EP properties
- Good corrosion protection
- Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3430	150	150	14.9	98	-21

Neste Industrial Gear 220 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 220

AGMA 9005-E02 5 EP
David Brown 5EP
U.S. Steel 224

- Excellent EP properties
- Good corrosion protection
- Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3440	220	220	19.0	97	-24

Neste Industrial Gear 320 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 320

AGMA 9005-E02 6 EP
David Brown 6EP
U.S. Steel 224

EP Excellent EP properties
Cor Good corrosion protection
Oxy Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3450	320	320	24.2	96	-12

Neste Industrial Gear 460 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 460

AGMA 9005-E02 7 EP
David Brown 7EP
U.S. Steel 224

EP Excellent EP properties
Cor Good corrosion protection
Oxy Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3460	460	460	31.1	98	-15

Neste Industrial Gear 680 EP

EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)

ISO-L-CKC 680
AGMA 9005-E02 8 EP
U.S. Steel 224

EP Excellent EP properties
Cor Good corrosion protection
Oxy Excellent oxidation resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3473	680	680	41.7	102	-12

Synthetic industrial gearbox oils

Neste Industrial Gear NEX 68 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 68
AGMA 9005-E02 2 EP
David Brown 2EP

- Excellent EP properties
- Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3500	68	68	11.1	154	-45

Neste Industrial Gear NEX 100 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 100
AGMA 9005-E02 3 EP
David Brown 3EP

- Excellent EP properties
- Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3501	100	100	15.3	160	-45

Neste Industrial Gear NEX 150 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 150
AGMA 9005-E02 4 EP
David Brown 4EP

- Excellent EP properties
- Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3502	150	150	20.6	159	-39

Neste Industrial Gear NEX 220 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 220
AGMA 9005-E02 5 EP
David Brown 5EP

- Excellent EP properties
- Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3503	220	223	27.7	161	-39

Neste Industrial Gear NEX 320 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 320
AGMA 9005-E02 6 EP
David Brown 6EP

- EP Excellent EP properties
- Cor Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3504	320	320	37	165	-39

Neste Industrial Gear NEX 460 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 460
AGMA 9005-E02 7 EP
David Brown 7EP

- EP Excellent EP properties
- Cor Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3505	460	465	49	165	-36

Neste Industrial Gear NEX 680 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 680
AGMA 9005-E02 8 EP

- EP Excellent EP properties
- Cor Brilliant corrosion resistance
- Excellent wear resistance

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3506	680	688	66	167	-33

Neste Industrial Gear S 100 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKD 100
AGMA 9005-E02 3 EP
David Brown 3EP

- Excellent protection against micropitting
- EP Excellent EP properties
- °C Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3480	100	100	14.7	152	-55

Neste Industrial Gear S 150 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKD 150
AGMA 9005-E02 4 EP
David Brown 4EP

- Excellent protection against micropitting
- Excellent EP properties
- Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3482	150	150	20. 1	155	-48

Neste Industrial Gear S 220 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKD 220
AGMA 9005-E02 5 EP
David Brown 5EP

- Excellent protection against micropitting
- Excellent EP properties
- Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3485	220	220	26.5	158	-48

Neste Industrial Gear S 320 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKD 320
AGMA 9005-E02 6 EP
David Brown 6EP

- Excellent protection against micropitting
- Excellent EP properties
- Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3490	320	320	36.2	160	-48

Neste Industrial Gear S 460 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 460
AGMA 9005-E02 7 EP
David Brown 7EP

- Excellent protection against micropitting
- Excellent EP properties
- Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3499	460	460	47.0	160	-39

Neste Industrial Gear S 1000 EP

Fully synthetic EP gear oil for industrial use

Meets or exceeds the following quality criteria:
DIN 51517-3 (CLP)
ISO-L-CKC 1000
AGMA 9005-E02 8A EP

- Excellent protection against micropitting
- EP Excellent EP properties
- Very wide operating temperature range
- Excellent performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3492	1000	1000	84.8	167	-27

Quenching oil

Neste Quenching F

Quenching oil

- Excellent oxidation and temperature resistance
- Long service life
- No major tendency to form precipitation
- High flash point

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
4068	16	3.7	114	-27

Synthetic food grade lubricating oils

Neste Nexlube AW 32

Food grade lubrication oil

Meets or exceeds the following quality criteria:
FDA 21 CFR 178.3570

- Clean, colorless, practically odorless
- Multi-purpose
- Long service life
- Very good performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
4611	32	32	5.9	135	-55

Neste Nexlube AW 68

Food grade lubrication oil

Meets or exceeds the following quality criteria:
FDA 21 CFR 178.3570

- Clean, colorless, practically odorless
- Multi-purpose
- Long service life
- Very good performance at low temperatures

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
4613	68	67	10.1	136	-53

Slideway oils

Neste Slideway 32

Slideway oil

Meets or exceeds the following quality criteria:
ISO-L-G 32

- Excellent stick-slip properties
- Excellent lubricating properties
- Excellent adhesion
- Excellent wear resistance

Product number	ISO VG class	ISO-L-G class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3810	32	32	32	5.6	114	-39

Neste Slideway 68

Slideway oil

Meets or exceeds the following quality criteria:
ISO-L-G 68

- Excellent stick-slip properties
- Excellent lubricating properties
- Excellent adhesion
- Excellent wear resistance

Product number	ISO VG class	ISO-L-G class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3812	68	68	68	9	106	-30

Neste Slideway 220

Slideway oil

Meets or exceeds the following quality criteria:
ISO-L-G 220

- Excellent stick-slip properties
- Excellent lubricating properties
- Excellent adhesion
- Excellent wear resistance

Product number	ISO VG class	ISO-L-G class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3815	220	220	220	19.1	97	-9

Heat transfer oils

Neste Therm 4

Heat transfer oil

- Good temperature resistance
- Good oxidation resistance
- Low vapor pressure

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3380	17	3.7	105	-27

Neste Therm 5

Heat transfer oil

- Good temperature resistance
- Good oxidation resistance
- Low vapor pressure

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3381	31	5.3	104	-12

Neste Therm S 8

Synthetic heat transfer oil

Meets or exceeds the following quality criteria:
ISO 6743-12 Q

- Good temperature resistance
- Excellent oxidation resistance
- Low vapor pressure

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3382	47	7.9	140	-57

Pneumatic tools

Neste Pneumatic 46

Pneumatic tool oil

Meets or exceeds the following quality criteria:
ISO-L-PBC 46

- Excellent wear resistance
- Little formation of oil mist
- Excellent adhesion

Product number	ISO VG class	ISO-L-PBC class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3540	46	46	46	7.2	121	-39

Neste Pneumatic 100

Pneumatic tool oil

Meets or exceeds the following quality criteria:
ISO-L-PBC 100

- Excellent wear resistance
- Little formation of oil mist
- Excellent adhesion
- Excellent wear resistance

Product number	ISO VG class	ISO-L-PBC class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3541	100	100	100	11.6	104	-24

Air compressor oils

Neste Compressor 68

Piston compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Good oxidation resistance
- Ashless
- Very low carbon build-up
- Good rust prevention properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3550	68	68	8.8	102	-27

Neste Compressor 100

Piston compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Good oxidation resistance
- Ashless
- Very low carbon build-up
- Good rust prevention properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3551	100	100	11.4	102	-27

Neste Compressor 150

Piston compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Good oxidation resistance
- Ashless
- Very low carbon build-up
- Good rust prevention properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3552	150	150	14.7	96	-21

Neste Compressor 220

Piston compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VBL

- Good oxidation resistance
- Ashless
- Very low carbon build-up
- Good rust prevention properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3550	220	220	19	97	-21

Synthetic compressor oils

Neste Compressor NEX 46

Synthetic compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL,
ISO 6743-3A-DAJ

- Excellent oxidation stability
- Excellent antiwear properties
- Very low deposits
- Very good cold properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3555	46	45	7,5	133	-39

Neste Compressor NEX 68

Synthetic compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL
ISO 6743-3A-DAJ

- Excellent oxidation stability
- Excellent antiwear properties
- Very low deposits
- Very good cold properties

Product number	ISO VG class	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
3556	68	68	9,8	128	-39

Transformer oils

Neste Trafo 10X

Transformer oil

Meets or exceeds the following quality criteria:
IEC 60296 (ed.4)
ASTM D 3487 Type II

- High dielectric strength
- Excellent performance at low temperatures
- Good cooling properties
- Good oxidation resistance

Product number	Viscosity index	Pour point °C	Cold viscosity cSt -30 °C	Dielectric strength kV
4140	7.6	-63	730	50

Neste Switch 3 X

Switch oil

Meets or exceeds the following quality criteria:
IEC 60296(82) Class III A

- High dielectric strength
- Small electrical losses
- Good cooling properties
- Excellent performance at low temperatures

Product number	Viscosity index	Pour point °C	Cold viscosity cSt -40 °C	Dielectric strength kV
4141	3.2	-70	137	58

Form oils

Neste Mould L

Concrete mold release oil

- Easy to apply
- Protects the mold surface from moisture
- Prevents steel molds from rusting
- Prevents the formation of bubbles in concrete

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Pour point °C
4110	3.4	1.4	-48

Neste Mould M

Concrete mold release oil

- Easy to apply
- Protects the mold surface from moisture
- Prevents steel molds from rusting
- Prevents the formation of bubbles in concrete

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Pour point °C
4111	6.3	2	-48

Anti-corrosion agents

Neste Antirust 30 HD

Protective oil for internal protection of machines

Meets or exceeds the following quality criteria:
MIL-L-2160

- Efficient rust protection
- Good oxidation resistance
- For long-term storage of engines

Product number	SAE	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
4833	30	94.2	11.2	105	-33

White oil

Neste Technical White Oil S 22

Fully synthetic technical white oil

- Particularly wide operating temperature range
- Extremely low evaporation losses
- Almost odorless

Product number	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
4710	16.8	3.8	124	-69

Neste Biosaw

Biodegradable saw chain oil

- Environmentally friendly
- Produced of renewable raw materials
- Excellent lubricating properties

Product number	Viscosity index	Pour point °C	Cold viscosity cSt -20 °C	Biodegradability OECD 301 F
5510	70	-39	1,700	>80%

Machining fluids

Metal removal is the most common machining method. These methods include lathing, drilling, planing, reaming and grinding.

Machining fluids are used as cooling and lubricating agents, and they are used for lubrication, cooling, purging chips created and giving protection against corrosion throughout the process.

The three main types of machining fluids are oils, emulsions and aqueous solutions. Each type has their special properties:

Oils: Good lubrication ability + possible EP additives + lower cooling ability

Emulsions: Good cooling ability + lower lubricating ability + possible EP additives

Aqueous solutions: Excellent cooling ability + lower lubricating ability

Additives

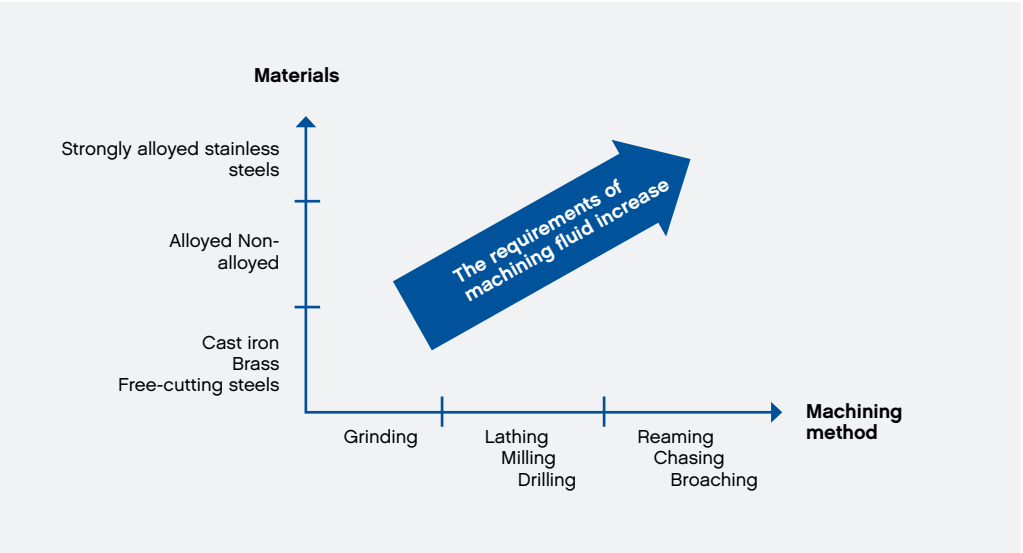
Typical additives used in machining fluids include

- EP additives enhancing lubrication in high temperatures. May darken yellow metals.
- Anti-corrosive agents protecting machines and objects worked on from corrosion.
- Anti-foam agents used to prevent the foaming of water soluble machining liquids in particular.
- Emulgators generating oil-water emulsion.
- Biocides, which protect emulsions and aqueous solutions from micro-organisms thus lengthening the service life of machining fluids.

Choosing a machining fluid

Machining methods and values, the requirements of the metal worked on, tool properties as well as other conditions determine which machining liquids will be used. Difficult materials and slow machining methods emphasize good lubricating ability and EP properties, in which case the right choice often is a machining oil. Correspondingly, fast machining methods require very good cooling ability and the best result is often achieved with aqueous solutions. Emulsions combine the good lubrication and cooling properties and they are often suitable for even more demanding machining tasks.

Machining fluids in working metals



Machining oils

Neste Cutting Neatoil 15

Machining oil for steel grades

- Efficient EP additives
- For high feeds
- Good chip removal ability
- Contains active sulfur

Product number	Viscosity cSt / 40 °C
3995	15

Neste Cutting Neatoil 200

Machining oil for steel grades

- Efficient EP additives
- For high feeds
- Also suitable for machining difficult materials

Product number	Viscosity cSt / 40 °C
4070	16

Neste Cutting Neatoil K1

Machining oil for steel grades and yellow metals

- Passive EP additives
- Does not cause color defects for yellow metal
- Good quality of machined surface
- Suitable for general machining

Product number	Viscosity cSt / 40 °C
4004	31

Neste Cutting Neatoil MT 13

Machining oil for steel grades and yellow metals

- Passive EP additives
- Does not cause color defects for yellow metal
- Good chip removal ability

Product number	Viscosity cSt / 40 °C
4006	13

Neste Cutting 100

Emulsifiable machining fluid

- Effective lubrication
- Good cooling properties
- Prevents bacterial and fungal growth

Product number	Viscosity cSt / 40 °C	pH (5%)	Refractometer index
3970	35	9.1	0.9

Neste Cutting F 110

Semi-synthetic emulsifiable machining fluid

- Efficient anti-wear / EP additives
- Cor Efficient anti-corrosion properties
- Very stable emulsion
- Prevents bacterial and fungal growth

Product number	Viscosity cSt / 40 °C	pH (5%)	Refractometer index
3973	48	9.3	1.4

Car chemicals and detergents

Coolants

Neste coolants are either ethylene of propylene glycol -based coolants suitable for cooling systems of mobile fleet. Glycols used as the base fluid provide good protection against freezing and varied additives protect the cooling system components from corrosion.

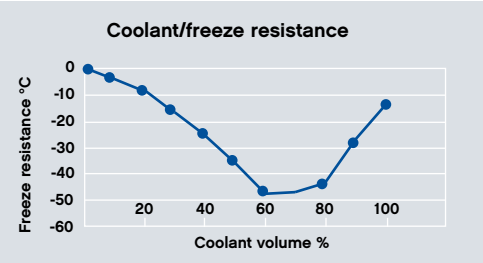
Change interval

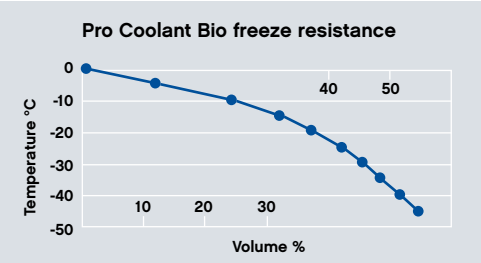
The additives used in the coolant dictate its performance, which together with the engine manufacturer's recommendations determine the change interval.

Freeze resistance and its measurement

The freeze resistance of ethylene glycol -based coolants can be measured either with a gravimeter or a refractometer. However, measurement with gravimeter may produce inaccurate results due to, for example, impurities and additives included in the coolant. In most cases, refractometer gives more accurate results.

Measurement of propylene glycol -based coolants (Neste Biocoolant Longlife) cannot be performed with a gravimeter, because when the specific gravity of water and base glycol is almost the same, the propylene glycol volume cannot be determined. In this case, refractometer is the correct usable measuring device.





It is not recommended that different coolants are mixed, but during topping up of anti-freeze agent

Neste Special Coolant and Neste Pro Coolant XLC can be mixed (to improve freeze resistance) when needed. Even then it is recommended that a single coolant is changed to the system as soon as possible. Ethylene and propylene glycol -based coolants must not be mixed.

Coolants

Neste Pro+ Coolant W-II

Longlife multi vehicle coolant concentrate

Meets or exceeds the following quality criteria:	MAN 324 Typ NF , Typ Si-OAT
VW TL-774L (G12 evo)	MB 325.5
VW TL-774J (G13)	MTU MTL 5048
VW TL-774G (G12++)	MWM
VW TL-774F (G12+)	Opel/Vauxhall GME L1301
VW TL-774D (G12)	Tesla
VW TL-774C (G11)	Volvo Cars 128 6083 / 002
Alfa Romeo, Fiat, Lancia 9,55523	ASTM D3306-20
BMW LC-18, LC-87, LC-97	BS 6580.2010
Case IH Agriculture JIC-501	FVV Heft R530
Chrysler MS-7170	GB 29743-2013
Cummins 85T8-2	JIS K2234-2018
Deutz DQC CA-14	NF R15-601-20
Ford ESD-M97B49-A	UNE 26-361-88/1
Iveco 18-1830	Önorm V5123
Jenbacher	

Product number	Color	Freeze protection of the coolant diluted for use:
7782	Red-violet	-36 °C

- Hybrid organic acid technology (Si-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Neste Pro+ Coolant W-II Ready

Ready-to-use longlife multi vehicle coolant

Meets or exceeds the following quality criteria:	MAN 324 Typ NF , Typ Si-OAT
VW TL-774L (G12 evo)	MB 326.5 (MB 325.5)
VW TL-774J (G13)	MTU MTL 5048
VW TL-774G (G12++)	MWM
VW TL-774F (G12+)	Opel/Vauxhall GME L1301
VW TL-774D (G12)	Tesla
VW TL-774C (G11)	Volvo Cars 128 6083 / 002
Alfa Romeo, Fiat, Lancia 9,55523	ASTM D3306-20
BMW LC-18, LC-87, LC-97	BS 6580.2010
Case IH Agriculture JIC-501	FVV Heft R530
Chrysler MS-7170	GB 29743-2013
Cummins 85T8-2	JIS K2234-2018
Deutz DQC CA-14	NF R15-601-20
Ford ESD-M97B49-A	UNE 26-361-88/1
Iveco 18-1830	Önorm V5123
Jenbacher	

Product number	Color	Freeze protection of the coolant diluted for use:
7783	Red-violet	-36 °C

- Hybrid organic acid technology (Si-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Neste Pro+ Coolant M

Longlife multi vehicle coolant concentrate

Meets or exceeds the following quality criteria:	VW TL-774G (G12++)
Cummins CES 14603	ASTM D3306 Type I
Deutz DQC CC-14	ASTM D4985
Liebherr Minimum LH-01-COL3A	BS 6580:2010
MAN 324 Typ Si-OAT	JIS K 2234:2006
MB-approval 325.5	SAE J1034
MB-approval 325.6	ÖNORM V 5123
MTU MTL 5048	CUNA NC 956-16
Porsche: MY 1996-	SANS 1251:2005
Scania 2008-	China GB 29743-2013
	AS 2108-200

Product number	Color	Freeze protection of the coolant diluted for use:
7774	Violet	-37 °C

- Hybrid organic acid technology (Si-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Neste Pro+ Coolant M Ready Coolant M 50%

Ready-to-use longlife multi vehicle coolant

Meets or exceeds the following quality criteria:
Cummins CES 14603
Deutz DQC CC-14
Liebherr Minimum LH-01-COL3A
MAN 324 Typ Si-OAT
MB 325.5, MB 325.6, MB 326.5
MB 326.6
MTU MTL 5048

Porsche: MY 1996-
Scania 2008-
VW TL-774G (G12++)
ASTM D3306 Type III
ASTM D4985
BS 6580:2010
JIS K 2234:2006
SAE J1034

- Hybrid organic acid technology (Si-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Product number	Color	Freeze protection of the coolant diluted for use:
7775	Violet	-37 °C

Neste Pro Coolant XLC-II

Longlife multi vehicle coolant concentrate

Meets or exceeds the following quality criteria:
ASTM D3306 Type I
ASTM D6210 Type I-FF
GB 29743-2013
JIS K 2234

Caterpillar Motoren GCM34
Deutz DQC CB-14
DFS 93K217
Fiat 9.55523
Ford WSS-M97B44-D
GMW 3420 (DEX-COOL)

Komatsu 07.892
MAN 324 Typ SNF
MB 325.3 (concentrate)
MB 326.3 (ready to use)
Skoda 61-0-0257
STJLR.03.5212
Volvo VCS-2 , VCS-1
VW TL-774-F (G12+)
VW TL-774-D (G12)

- Organic acid technology (OAT)
- Silicate free
- Excellent freezing protection
- Ultimate corrosion protection

Product number	Color	Freeze protection of the coolant diluted for use:
7784	Dark red	-36 °C

Neste Pro Coolant XLC-II Ready

Ready-to-use longlife multi vehicle coolant

Meets or exceeds the following quality criteria:
ASTM D3306 Type I
ASTM D6210 Type I-FF
GB 29743-2013
JIS K 2234

Caterpillar Motoren GCM34
Deutz DQC CB-14
DFS 93K217
Fiat 9.55523
Ford WSS-M97B44-D
GMW 3420 (DEX-COOL)

Komatsu 07.892
MAN 324 Typ SNF
MB 325.3 (concentrate)
MB 326.3 (ready to use)
Skoda 61-0-0257
STJLR.03.5212
Volvo VCS-2 , VCS-1
VW TL-774-F (G12+)
VW TL-774-D (G12)

- Organic acid technology (OAT)
- Silicate free
- Excellent freezing protection
- Ultimate corrosion protection

Product number	Color	Freeze protection of the coolant diluted for use:
7785	Dark red	-36 °C

Neste Pro Coolant P-Hybrid

Longlife multi vehicle coolant concentrate

Meets or exceeds the following quality criteria:
ASTM D3306
ASTM D6210
JIS K2234

Abarth, Alpine
Bobcat
Citroën, DS Automobiles, Peugeot
PSA B 71 1111
Daewoo, Daihatsu, Datsun
Fiat, Lancia, Alfa Romeo 9,55523
Ford WSS-M97B57-A1
Fuso, Hino, Honda
Hyundai/Kia
Infiniti, Kubota, Maruti-Suzuki
Maserati, Mazda
MB 325.7
Mitsubishi
Nissan RNES-B-00014 v2.1,
Opel/Vauxhall
Renault 41-01-001 –V, Renault
RNES-B-00014 v2.1, Renault
Samsung
Ssangyong, Subaru, Suzuki
Toyota/Lexus

- Hybrid organic acid technology (P-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Product number	Color	Freeze protection of the coolant diluted for use:
7780	Green	-37 °C

Neste Pro Coolant P-Hybrid Ready

Ready-to-use longlife multi vehicle coolant

Meets or exceeds the following quality criteria:
ASTM D3306
ASTM D6210
JIS K2234

Abarth, Alpine
Bobcat
Citroën, DS Automobiles, Peugeot
PSA B 71 1111
Daewoo, Daihatsu, Datsun
Fiat, Lancia, Alfa Romeo 9,55523
Ford WSS-M97B57-A1
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Infiniti, Kubota, Maruti-Suzuki
Maserati, Mazda
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Nissan RNES-B-00014 v2.1,
Opel/Vauxhall
Renault 41-01-001 –V, Renault
RNES-B-00014 v2.1, Renault
Samsung
Ssangyong, Subaru, Suzuki
Toyota/Lexus

- Hybrid organic acid technology (P-OAT)
- Nitrite free
- Excellent freezing protection
- Ultimate corrosion protection

Product number	Color	Freeze protection of the coolant diluted for use:
7781	Green	-37 °C

Neste Special Coolant

Coolant concentrate

Meets or exceeds the following quality criteria:
ASTM D3306 Type I
BS 6580:2010

Product number	Color	Freeze protection of the coolant diluted for use:
7756	Green	-35 °C

Good freeze resistance

Neste Special Coolant Ready

Ready-to-use coolant

Meets or exceeds the following quality criteria:
ASTM D3306 Type III
BS 6580:2010

Product number	Color	Freeze protection of the coolant diluted for use:
7757	Green	-35 °C

Good freeze resistance

Neste Pro Coolant Bio

Biodegradable long change interval coolant concentrate

Meets or exceeds the following quality criteria:
ASTM D3306 Type II
ASTM D5216
ASTM D6210 Type II-FF

Product number	Color	Freeze protection of the coolant diluted for use:
7760	Green	-38 °C

Organic acid technology
Silicate-free
Excellent freeze resistance
Brilliant corrosion resistance

Neste Pro Coolant Bio Ready

Biodegradable long change interval coolant, ready to use

Meets or exceeds the following quality criteria:
ASTM D3306 Type IV
ASTM D5216
ASTM D6210 Type IV-FF

Product number	Color	Freeze protection of the coolant diluted for use:
7761	Green	-38 °C

Organic acid technology
Silicate-free
Excellent freeze resistance
Brilliant corrosion resistance

Brake fluid

Neste Pro Brake Fluid

Top quality brake fluid

Meets or exceeds the following quality criteria:
DOT 5.1/DOT 4+/DOT 4/Super DOT 4/DOT 3
ABS/ESP/ACC/TCS/DSC

SAE J 1703, J 1704
FMVSS No. 116
ISO 4925 Class 6
JIS K 2233 Class 6

- Wide range of applications
- Good heat resistance
- Excellent corrosion protection of different metals
- Compatible with different seal and gasket materials

Product number	Cold viscosity cP/-40 °C	Boiling point:
7921	max. 700	265 °C

Windshield washing fluids

A great deal is demanded from windshield washing fluids used in vehicles. It must keep the windshield clean of dirt all year around and protect the windshield wipers from soiling. It must not foam or form a film on the windshield. In addition, it must prevent freezing of the washing system during cold seasons.

All windshield washing fluids in the Voltera range are ethanol-based and eco-friendly and do not contain poisonous methanol. In addition to good freeze resistance, they share good technical and operating properties: they are long-lasting, suit year-round use, are easy to pour from the packaging and have a pleasant odor. Undiluted fluid can also be used for cleaning soiled windshield wipers.

Neste Voltera Pro

Protective windshield washer fluid, ready to use

- Improves driving safety
- Cleans and protects the windshield
- Excellent visibility even in torrential rain
- Does not contain toxic methanol

Product number	Freeze resistance:
7643	-21 °C

Neste Voltera Strong -80

Windshield washer fluid concentrate

- Cleans the windshield efficiently
- Economical to use
- Protects the windshield washing equipment from freezing
- Does not contain toxic methanol

Product number	100%	1:1	1:2	1:3	1:4
7640	-80 °C	-30 °C	-17 °C	-11 °C	-8 °C

Neste Voltera Arctic Ready

Windshield washer fluid for arctic conditions, ready to use

- Protects the windshield washing equipment from freezing
- Cleans the windshield efficiently
- Does not contain toxic methanol

Product number	Freeze resistance:
7645	-33 °C

Neste Voltera Citrus Ready

Windshield washer fluid with lemon odor, ready to use

- Cleans the windshield efficiently
- Protects the windshield washing equipment from freezing
- Does not contain toxic methanol

Product number	Freeze resistance:
7642	-20 °C

Neste Voltera Ready

Windshield washer fluid, ready to use

- Cleans the windshield efficiently
- Protects the windshield washing equipment from freezing
- Does not contain toxic methanol

Product number	Freeze resistance:
7641	-20 °C

Neste Voltera Summer Ready

Windshield washer fluid for summer, ready to use

- Efficiently cleans off insects and summer dirt
- Almost odorless

Product number
7649

AdBlue

AdBlue

AdBlue urea solution

Meets or exceeds the following quality criteria:
ISO 22241

- Finnish product of high quality
- Meets the requirements of ISO 22241
- Wide range of delivery methods and packages
- Suitable for all vehicles and work machines using AdBlue

Product number	Urea content:
7862	32.5% by weight

Detergents

Neste Shampoo

Vehicle and machine detergent

- Efficient basic detergent
- Excellent removal of oil, grease, road salt and soot
- Tender to different materials

Product number	Dosing:
7591	5–20%

Other products

Neste Pro 4T small-engine gasoline

Alkylate gasoline for four-stroke engines

- Clean combustion
- Almost odorless
- Long storage life
- Best for your engine

Product number
7960

Neste Pro 2T small-engine gasoline

Alkylate gasoline for two-stroke engines

- Clean combustion
- Almost odorless
- Long storage life
- Best for your engine

Product number
7961

Neste Valopetroli

High-quality Wallas-approved heating fuel that is free of aromatics and sulfur. Smoke point at least 35 mm.

- Almost odorless
- Clean combustion

Product number
7652

Alphabetical directory

Unique performance for Nordic conditions.

Sales and marketing

Neste Marketing Ltd
PO BOX 95,
00095 Neste, Finland

Customer service
0200 11311
Monday to Friday 8 am - 4 pm.
(0,16 €/min + mobile phone charge/local network charge)

01 / 2024