Product catalog

Neste lubricants
and chemicals

NESTE

Contents

The world's most Finnish lubricant

From the heat of a sauna directly to ice-cold water in a hole in the ice. From the light of white nights in summer to the darkness of arctic nights in winter. From scorching heat to freezing temperatures, slush and slippery conditions.

We know extreme conditions only too well. We were born to overcome them. Our world-class expertise promises you more power, less loading on the environment and performance for the toughest challenges.

Our products are developed in Finland and designed to overcome the demanding and varied conditions of the north. Because they withstand these conditions, they withstand anything. Everywhere.

We are providing our customers with the latest high technology using our decades-long research and development experience. Our high quality lubricants are based on the unique NEXBASE™ base oil refined in Finland. Together with the world's best additives, NEXBASE™ makes our lubricants world-beaters.

Actions speak louder than words. The quality and reliability of Neste products is proven in extreme conditions. Every day, in all continents.

When you want the best, when you expect pure professionalism and demand OEM-approved performance, 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. Our top quality lubricants are based on the unique NEXBASE™ base oil refined in Finland. Together with the world's best additives, NEXBASE™ makes these lubricants world-beaters.

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

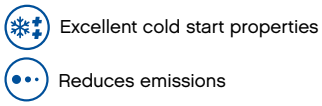
Lubricants of high quality, also suitable for older vehicles. Excellent price-to-quality ratio.

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.



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, prolonged 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.

A5/B5 Top quality thin low friction special oils for prolonged changed intervals. 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.

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.

C4 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.

E Diesel engine oils for heavy equipment

E2 Diesel engine oils for normal use with normal change intervals. Compare with above ACEA E2 class.

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.

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.

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 SL, and diesel engine C classes, such as CI-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 oli

Meets or exceeds the following quality criteria:
ACEA C2
Ford WSS-M2C950-A

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1182	0W-30	842	46	9.4	194	-51	<-40

Neste Pro+ F 5W-20

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ
ACEA C5
Ford WSS-M2C-948-B
Ford WSS-M2C-925-A, 925-B
Ford WSS-M2C-913-A, 913-B, 913-C
STJLR.03.5004

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1176	5W-20	852	42	7.8	155	-39	<-35

Neste Pro+ V 0W-20

Fully synthetic motor oli

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1177	0W-20	844	49	9.2	188	-45	<-40

Neste Pro+ W LL-III 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
ACEA C3
BMW Longlife-04
MB-Approval 229.51
VW 504.00, VW 507.00

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1178	5W-30	853	69	11.8	170	-42	<-40

Neste Pro F 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SL, SJ/CF
ACEA A5/B5, A1/B1
Ford WAA-M2C913-A
Ford WSS-M2C912-A1
Ford WSS-M2C913-B
Ford WSS-M2C913-C
Ford WSS-M2C913-D
Renault 0700
Recommended for use where Fiat 9.55535.G1 is specified.

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1175	5W-30	853	55	9.8	166	-45	<-35

Neste Pro C2 0W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
ACEA C2
PSA B71 2312

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1171	0W-30	842	55	10.0	171	-51	<-40

Neste Pro C2 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ/CF
ACEA C2
Fiat 9.55535-S1
PSA B71 2290
Renault RN0700

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1172	5W-30	852	57.5	10.3	170	-39	<-35

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 -04
BMW Longlife -01
Renault RN17 RSA (performance level)
GM dexos2
MB-Approval 229.31
MB-Approval 229.51
MB-Approval 229.52
VW 505.00/505.01

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1184	5W-30	854	72	12	164	-39	<-35

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
Ford WSS-M2C917A
GM dexos2
MB 226.5
MB-Approval 229.31
Porsche A40
Renault RN0700, RN0710
VW 502.00/505.00/505.01

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1173	5W-40	853	87	14.2	170	-51	<-35

Neste Pro C4 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
ACEA C4
MB-Approval 229.51,
MB 229.31, MB 226.51
Renault RN0720

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1174	5W-30	850	73	12.2	165	-42	<-35

Neste Pro 0W-20

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN-RC, SM, SL, SJ
Chrysler MS 6395
Ford WSS-M2C947-A
ILSAC GF-5/GF-4, GF-3

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1183	0W-20	845	46	8.7	170	-45	<-40

Neste Pro 0W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SL, SJ/CF
ACEA A5/B5, A1/B1

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1167	0W-30	855	54	9.7	169	-54	<-40

Neste Pro 0W-40

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ/CF
ACEA A3/B4, A3/B3
BMW LL-01
MB-Approval 226.5
MB-Approval 229.1
MB-Approval 229.3
MB-Approval 229.5
Renault RN 0700/0710
VW 502.00/505.00

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1168	0W-40	860	80	14.0	181	-54	<-40

Neste Pro 5W-30

Fully synthetic motor oli

Meets or exceeds the following quality criteria:
API SL, SJ/CF
ACEA A3/B4, A3/B3
BMW Longlife-01
Fiat 9.55535-G1
GM-LL-A-025,
GM-LL-B-025
MB-Approval 229.3
MB-Approval 229.5
VW 502.00/505.00

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1169	5W-30	855	67	11.6	170	-42	<-35

Neste Premium+ 5W-40

Synthetic motor oli

Meets or exceeds the following quality criteria:
API SM, SL, SJ/CF
ACEA A3/B4, A3/B3
MB 229.1
VW 502.00/505.00/505.01

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1165	5W-40	858	88	14.1	167	-45	<-35

Neste Premium+ 5W-50

Synthetic motor oli

Meets or exceeds the following quality criteria:
API SL, SJ/CF
ACEA A3/B4, A3/B3

- Excellent cold start properties
- Long oil change intervals
- For cars with high mileage

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1166	5W-50	850	104	18.1	194	-45	<-35

Neste Premium+ 10W-40

Semi-synthetic motor oli

Meets or exceeds the following quality criteria:
API SN, SM, SL, SJ/CF
ACEA A3/B4, A3/B3
MB 229.3
PSA B71 2300
Renault RN0700/RN0710
VW 50200/50500
Recommended for use where Fiat 9.55535.D2 and G2 is specified

- Good cold start properties
- Long oil change intervals
- Comprehensive engine protection

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1163	10W-40	869	95	14	150	-39	<-30

Neste Special 10W-30

Multigrade oil for gasoline engines

Meets or exceeds the following quality criteria:
API SF/CC

- Good cold start properties
- For cars with high mileage

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1179	10W-30	852	64	10.1	144	-36	-31

Neste Special 30

Monograde oil for gasoline engines

Meets or exceeds the following quality criteria:
API SG/CF-4

- Protects against wear
- For small engines

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1181	30	885	95	11.3	105	-27	<-20

Neste Turbo+ NEX 10W-40

Fully synthetic multigrade engine oil

Meets or exceeds the following quality criteria:
API CJ-4, CI-4, CH-4/SN
ACEA E9
DAF
Caterpillar ECF-3
Cummins CES 20081
Detroit Diesel DDC 93K218
Deutz DQC III-10LA
Mack EO-O Premium Plus
MAN M3575
MB-Approval 228.31
MTU Type 2.1
Renault Trucks RVI RLD-3
Scania Low Ash
Volvo VDS-4, VDS-3

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1869	10W-40	860	94	14	152	-42	<-30

Neste Turbo+ NEX 15W-40

Fully synthetic multigrade engine oil

Meets or exceeds the following quality criteria:
API CJ-4, CI-4, CH-4/SN
ACEA E9
Caterpillar ECF-3
Cummins CES 20081
Detroit Diesel DDC 93K218
Deutz DQC III-10LA
Mack EO-O Premium Plus
MAN M3575
MB-Approval 228.31
MTU Type 2.1
Renault Trucks RLD-3
Scania Low Ash
Volvo VDS-4, VDS-3

- Long oil change intervals
- Reduces emissions
- Very clean engine
- Protects against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1870	15W-40	862	105	14.6	144	-39	<-25

Neste Turbo+ E6 5W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CJ-4, CI-4, CH-4/0
ACEA E9/E7/E6/E4
Cummins CES 20081
Deutz DQC IV-10 LA
MAN 3271-1, 3477, 3575,
3677, 3691
MB-Approval 228.51
MTU Type 3.1
Scania LDF-4
Scania Low Ash
Volvo VDS-4

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1871	5W-30	861	74	12.2	166	-45	<-35

Neste Turbo+ E6 10W-40

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4/-
ACEA E9/E7/E6
Caterpillar ECF-1-a
Cummins CES 20076,
CES 20077
Deutz DQC IV-10 LA
JASO DH-2
Mack EO-N, EO-M Plus
MAN M3477, M3271-1
MB-Approval 228.51
MTU Type 3.1
Renault RVI RXD, RLD-2, RGD
Scania Low Ash
Volvo VDS-3, CNG

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1868	10W-40	861	91	13.8	155	-42	<-30

Neste Turbo+ 5W-30

Fully synthetic multigrade diesel engine oil

Meets or exceeds the following quality criteria:
ACEA E7/E4
Cummins CES 20,071/-2/-6/-7
Mack EO-M+
MAN M3277
MB 228.5
MTU Type 3
Renault RVI RXD
Scania LDF-3/LDF-2/LDF
Volvo VDS-3, VDS-2

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1867	5W-30	860	72	12	165	-54	<-35

Neste Turbo+ 10W-40

Synthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CF
ACEA E7/E4
Deutz DQC III-05
MAN M3277
MB-Approval 228.5
MTU Type 3
Renault RXD/RLD-2
Scania LDF-3, LDF-2/LDF
Volvo VDS-3

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1866	10W-40	867	89	13.5	152	-39	<-30

Neste Turbo LXE 10W-30

Semi-synthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4/SL
ACEA E7/E5/E3
Caterpillar ECF-2, ECF-1-a
Cummins CES 20,071/-2/-6/-7/-8
Deutz DQC III-10
Global DHD-1
Mack EO-N, EO-M Plus
MAN M3275
MB 228.3
MTU Type 2
Renault RVI RLD, RLD-2
Volvo VDS-3, VDS-2

- Good cold start properties
- Excellent fuel-saving properties

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1862	10W-30	868	81	12.2	146	-42	<-30

Neste Turbo LXE 10W-40

Multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4/SL
ACEA E7/E5/E3
Caterpillar ECF-2, ECF-1-a
Cummins CES 20,071/-2/-6/-7/-8
Deutz DQC III-10
Global DHD-1
Mack EO-N, EO-M Plus
MAN M 3275
MB 228.3
MTU Type 2
Renault RVI RLD, RLD-2
Volvo VDS-3, Volvo VDS-2

- Good cold start properties
- Protects against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1863	10W-40	867	100	14.8	154	-42	<-30

Neste Turbo LXE 15W-40

Multigrade diesel engine oil

Meets or exceeds the following quality criteria:
API CI-4, CH-4/SL
ACEA E7/E5/E3
Caterpillar ECF-2, ECF-1-a
Cummins CES 20,071/-2/-6/-7/-8
Deutz DQC III-10
Global DHD-1
JASO DH-1
Mack EO-N, EO-M Plus
MAN M3275
MB-Approval 228.3
MTU Type 2
Renault RVI RLD, RLD-2
Volvo VDS-3, Volvo VDS-2

Protects against wear
Keeps the engine clean

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1864	15W-40	870	106	14.9	145	-36	<-25

Neste Turbo S 15W-40

Fully synthetic diesel engine oil

Meets or exceeds the following quality criteria:
API CF, CE, CD/SF
CCMC D5, PD2
CCMC D5, PD2SHPD
Mack EO-K/2
MIL-L-2104 E
Volvo Truck Manual Gear Boxes
Volvo VDS

Keeps the engine clean

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1865	15W-40	875	91	14.0	142	-42	-33

Neste Diesel 10W-30

Multigrade diesel engine oil

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

Good cold start properties
Protects against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1856	10W-30	865	70	10.6	138	-36	<-30

Neste Diesel 15W-40

Multigrade diesel engine oil

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

Protects against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1857	15W-40	885	107	14.1	134	-33	<-25

Neste Diesel 10W

Single-grade diesel engine oil

Protects against wear

Meets or exceeds the following quality criteria:
API CF-2, CF, CD/SF

Allison C3
Caterpillar TO-2
MIL-L-2104 D

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1855	10W	877	38	6.5	122	-39	-33

Neste Diesel 20W-30

Diesel engine oil of single grade type

Protects against wear

Meets or exceeds the following quality criteria:
API CF-2, CF, CD/SF

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1858	20W-30	872	99	11.9	111	-33	<-20

Neste Diesel 30

Single-grade diesel engine oil

Protects against wear

Meets or exceeds the following quality criteria:
API CF-2, CF, CD/SF
Allison C3

Caterpillar TO-2
DB 227.0
MIL-L-2104 D

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1859	30	881	105	12.3	108	-33	-

Neste Farm Universal 10W-30

Multi-purpose oil for tractors and agricultural machines, STOU

Good cold start properties
Multi-purpose
Wet brake compatible

Meets or exceeds the following quality criteria:
API CG-4, CF-4, CF, CE/SF, CD/SF
ACEA E3, E2, E1
API GL-4
Allison C3, C4
Case MS 1206, MS 1209
(Hy-Tran Ultra)
Caterpillar TO-2
FNHA-2-C-201.00

Ford M2C 86A, 86B, 86C, 134A, 134C, 134D, 159B, 159C
Ford NH 82009201
JDM J20C, J20B, J20A, J27
MB 227.1
MF M1127A, M1139, M1144, M1145
NH 410B
ZF TE-ML 05K, 06B, 06C, 07B, 07D

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1861	10W-30	872	69	10.5	140	-42	-37

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.

www.neste.fi/voiteluainesuositukset

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Pumpability limit temperature °C
1170	10W-40	861	91	13.8	155	-42	<-40

Two-stroke engine oils

Neste Super Racing 2T

Fully synthetic two-stroke oil

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

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Flash point (PM) °C	Pour point °C
1941	875	54	9.4	84	-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	Density kg/m³ +15 °C	Flash point (PM) °C	Pour point °C
1939	50 (oil part)	858	100	-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	Density kg/m³ +15 °C	Flash point (PM) °C	Pour point °C
1938	872	58	-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:
API GL-4/GL-5
API MT-1
Mack GO-J
MAN 341 Type Z2
MAN 342 Type M3
MAN 341 Type E3
MAN M 3343 Type S
MB 235.8
MIL-PRF-2105E
SAE J2360
Scania STO 1:0
Volvo 97312
ZF TE-ML 02B, 05B, 07A, 12B, 16F, 17B, 19C

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2152	75W-90	868	107	15.3	152	192	-54	70,000 / -40 °C

Neste Pro Axle 75W-90

Fully synthetic drive gear oil

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

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2151	75W-90	886	86	14.7	180	222	-54	29,800 / -40 °C

Neste Pro Axle 75W-140

Fully synthetic drive gear oil

Meets or exceeds the following quality criteria:
API GL-5
MIL-L-2105 D
Scania STO 1:0

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2150	75W-140	857	172	25.0	181	220	-48	11,100 / -40 °C

Neste Premium Axle 80W-90

Synthetic gearbox and drive gear oil

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

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2149	80W-90	850	87	14.3	170	210	-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
MIL-L-2105 D

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2148	80W-140	851	177	25.2	176	225	-36	27,400 / -26 °C

Neste Axle 80W-90

Drive gear oil

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

Oxy Good oxidation resistance

EP Excellent EP properties

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2146	80W-90	883	128	14.0	107	224	-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

Oxy Good oxidation resistance

EP Excellent EP properties

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2145	80W-140	856	190	25.7	170	218	-39	32,600 / -26 °C

Neste Axle LS 80W-90

Limited slip drive gear oil

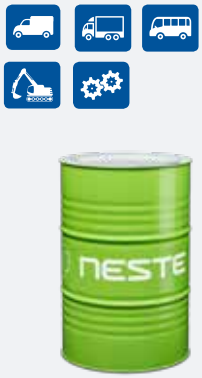
Meets or exceeds the following quality criteria:
API GL-5
MIL-L-2105 D

Excellent friction properties

EP Excellent EP properties

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2147	80W-90	890	127	14.4	113	218	-33	49,000 / -26 °C

Neste Pro Gear V 75W-80



Fully synthetic heavy vehicle gearbox oil for extended oil change intervals

Meets or exceeds the following quality criteria:
API GL-4
EATON Manual Transmission
MAN 341 Type E4
MAN 341 Type VR
MB-Approval 235.29
Volvo 97307
Voith Retarder 153.00090010

- Very wide operating temperature range
- Excellent EP properties
- Excellent protection against wear
- Helps reduce fuel consumption

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2111	75W-80	861	65	10.2	144	220	-55	150,000 / -40 °C

Neste Pro Gear 75W-80

Fully synthetic gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
MAN 341 Type E-3
MAN 341 Type Z-4
Renault/Peugeot/Citroën
ZF TE-ML 01L
ZF TE-ML 02L
ZF TE-ML 08
ZF TE-ML 16K
Volvo 97305

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2112	75W-80	860	56	9.5	155	234	-42	70,550 / -40 °C

Neste Pro Gear 75W-90

Fully synthetic gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
MIL-L-2105
ZF 13-118

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

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2113	75W-90	843	84	14.5	181	230	-63	28,500 / -40 °C

Neste Gear GL-4 80W-90

Gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
ZF TE-ML 08, 24A

- Good oxidation resistance
- Good protection against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2120	80W-90	882	152	14.7	95	244	-33	150,000 / -26 °C

Neste Gear GL-1 80W-90

GL-1 gearbox oil

Meets or exceeds the following quality criteria:
API GL-1

- Good oxidation resistance
- Good corrosion protection

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Tunneling point °C
2121	80W-90	886	138	14.0	99	274	-30	49,000 / -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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Tunneling point °C
2137	5W-30	867	64	10.8	160	226	-39	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 C3, C4
Case MAT 3505
Ford M2C-134 A/B/C/D, M2C-86B/C
Ford/New Holland FNHA-2-C-200.00 (hydraulic oil 134)
Ford/New Holland FNHA-2-C-201.00 (M2C-134D)
John Deere J20 A/B/C, J14B/C, J21A
Komatsu
Kubota UDT
Massey Ferguson M1135, M1141, M1143, M1145
Steiger SEMS 17001
Versatile 23M, 24M
Volvo 97303 (VCE WB 101)
White Farm (AGCO) Q-186
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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Tunneling point °C
2135	10W-30/80W	876	67	10.0	133	238	-42	21,500 / -26 °C

Neste Gear TO-4 10W

Gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
API MT-1
Allison C-4

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

Good oxidation resistance
Good protection against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2130	10W	871	37.6	6.2	112	236	-45	19,200 / -26 °C

Neste Gear TO-4 30

Gearbox oil

Meets or exceeds the following quality criteria:
API GL-4
API MT-1
Allison C-4

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

Good oxidation resistance
Good protection against wear

Product number	SAE	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2131	30	876	93	11.3	108	260	-36	24,245 / -26 °C

Automatic transmission oils

Neste ATF Multi

Multi-brand automatic transmission oil

Meets or exceeds the following quality criteria:
GM Dexron IID, IIE, III, IIIH, VI
BMW: LT 71141, LA 2634, M-1375.4, 6 ETL-7045E, ETL-8072B
Chrysler: ATF +3, Diamond SP-III, NAG-1, 3403-M115
Ford: Mercon, Mercon V, SP, LV, FNR 5
GM 9986195
Honda: ATF-Z1 (Not for CVT!)
Hyundai: SPH-IV
KIA: Red-1, SP-II, III, IV
Mercedes-Benz: 236.1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 14, NAG-1, 3403-M115

Mitsubishi: Diamond SP-II, III, IV
Nissan / Infiniti: S, D, J, K-matic
Subaru: ATF, ATF-HP
Toyota / Lexus: Type T, T-III, T-IV, WS (Not for hybrid!)
Volvo: 1161521, 1161540
VW / Audi: G-052-025-A2, G-055-005-A2, G-052-162-A1
VW / Audi: G-055-162-A6, G-052-990-A2, G-060-162-A2
VW / Audi: TL 52162
ZF ATF M 1375.4, 6

Very wide operating temperature range
Reduces friction
Suitable for long oil change intervals
Excellent protection against wear

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2160	843	28.5	6.0	163	202	-42	10,600 / -40 °C

Neste ATF CVT

Multi-brand automatic transmission oil for CVT gearboxes

Meets or exceeds the following quality criteria:
BMW / Mini cooper EZL 799
Dodge/Jeep NS-2, CVT fluid +4
Ford CVT23, CVT30, Mercon C
GM/Saturn DEX-CVT
Honda HMMF
Hyundai Genuine CVT Fluid
Hyundai/Kia SP-III (not in step up automatic transmissions)
MB 236.20
Mitsubishi CVT fluid J1, SP-III (not in step up automatic transmission)
Nissan NS-2
Subaru NS-2, Lineartronic CVT fluid
Suzuki TC, NS-2, CVT Green 1
Toyota TC
VW/Audi TL52180, G052 180, G052 516

- Very wide operating temperature range
- Excellent protection against wear
- Excellent friction properties

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2163	855	34.5	7.2	180	192	-45	9,000 / -40 °C

Neste ATF-S

Fully synthetic automatic transmission oil

Meets or exceeds the following quality criteria:
Allison C-4
Caterpillar TO-2
Denison
Ford M
GM Dexron IIE
MAN 339 Type L1, 339 Type V2, 339 Type Z2
MB-Approval 236.8
RBAS Lubricant Class TE-ML 09X
Renk
Sperry Vickers Hydraulic Pump Performance
Sundstrand
VOITH H55.6336.XX
Volvo 97335
ZF TE-ML 04D, 09, 14B, 16L, 21L

- Excellent performance at low temperatures
- Excellent protection against wear
- Withstands high temperatures

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2161	841	35	7.5	190	230	-55	10,000 / -40 °C

Neste ATF-X

Automatic transmission oil

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

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Flash point (COC) °C	Pour point °C	Cold viscosity cP/°C
2162	863	37	7.7	183	208	-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.

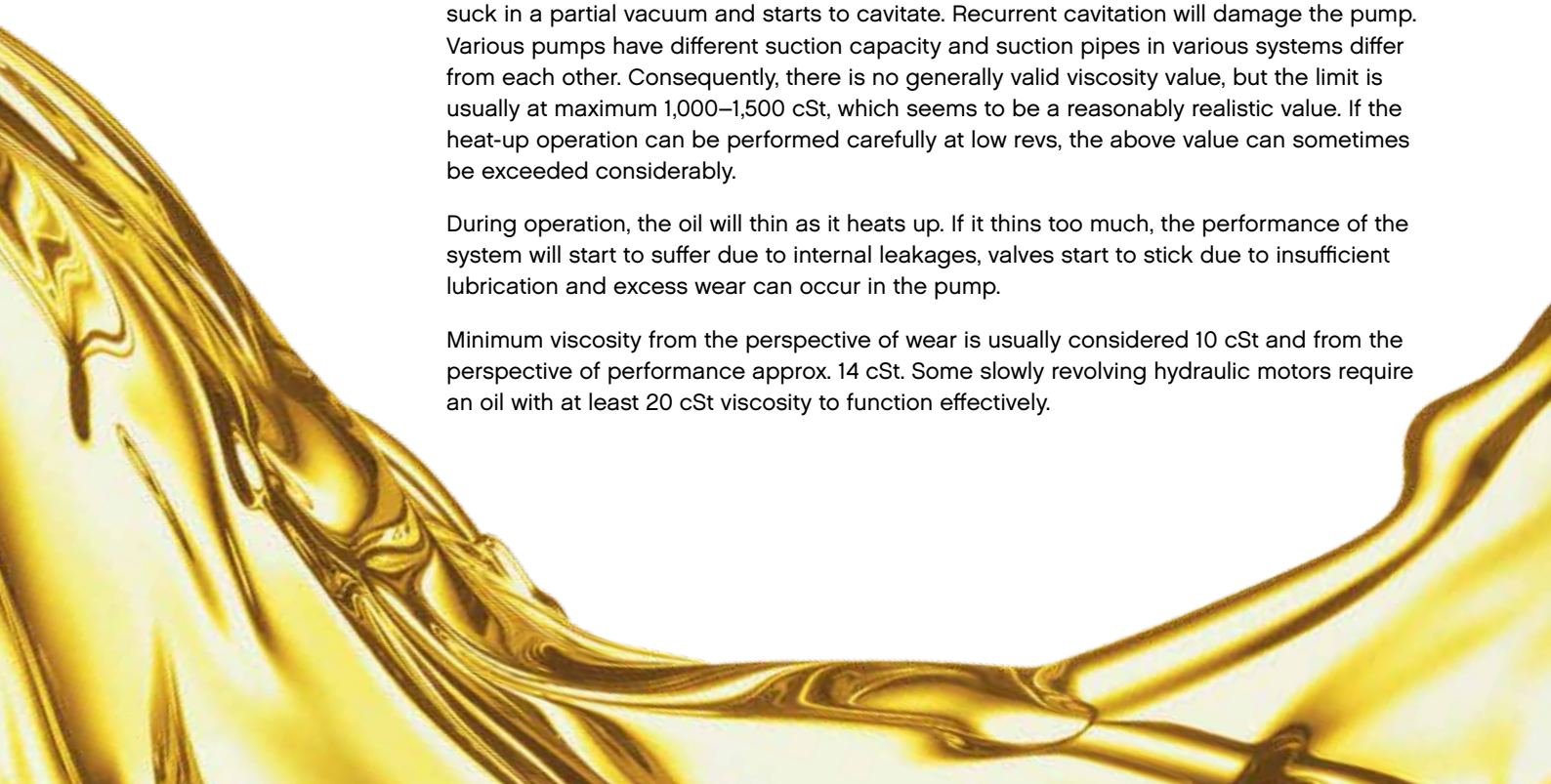
Approximate comparison of most well-known hydraulic oil classifications (DIN, ISO, SS)

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.



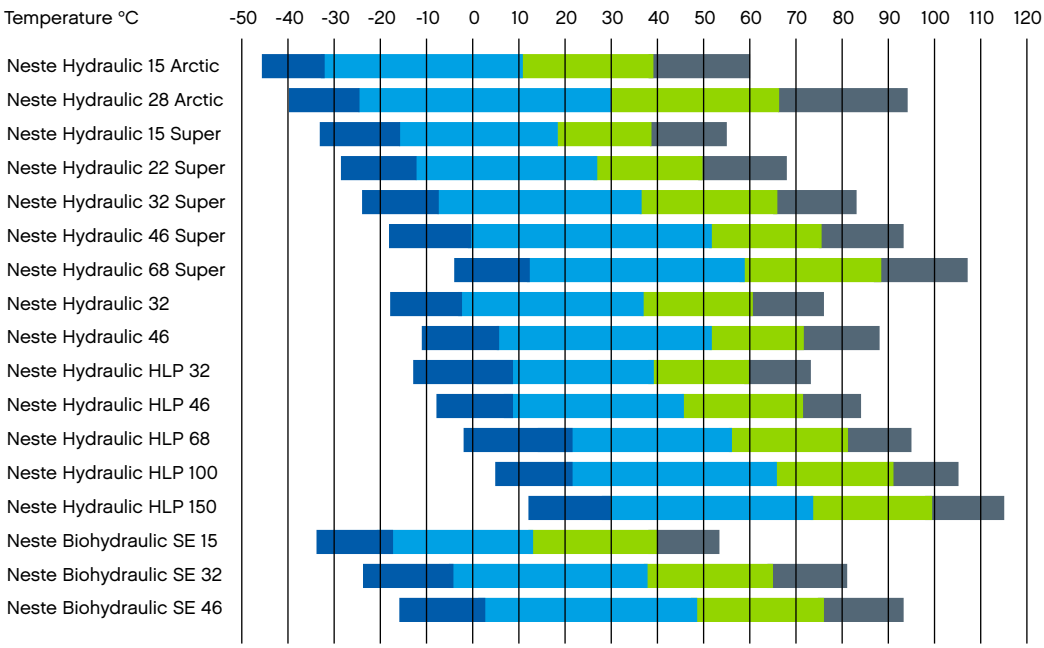
Optimum viscosity

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.

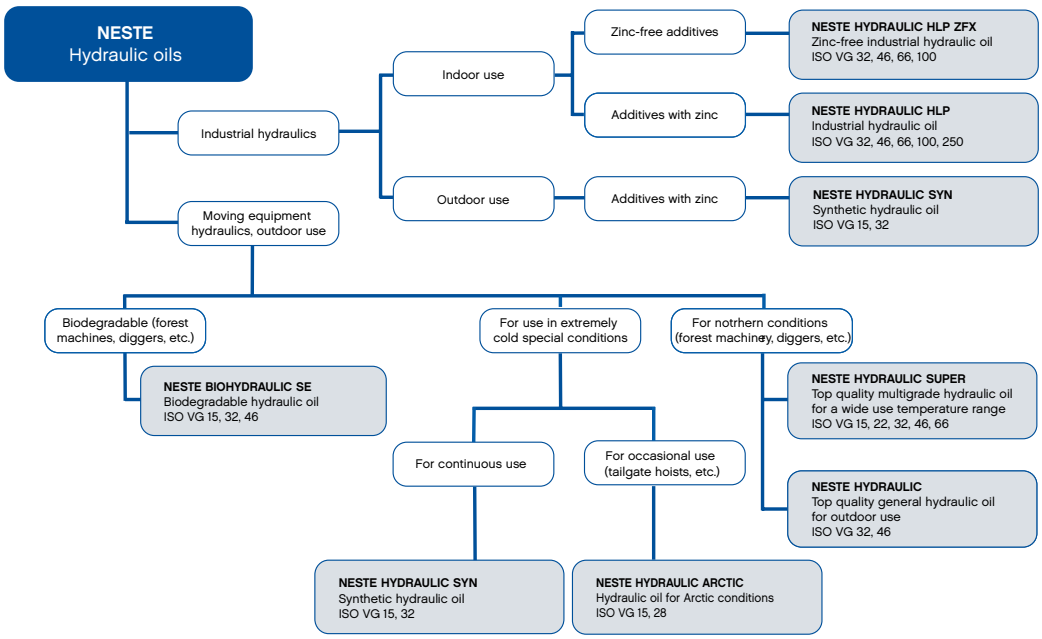
Typical temperature ranges

- 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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -30 °C
2615	15	880	15	5	305	-60	108	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -30 °C
2616	28	888	28	8.7	309	-57	111	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2625	15	839	15	4	179	-51	194	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2626	22	850	22	5.1	168	-54	202	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2627	32	859	32	7.2	200	-45	204	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2628	46	865	46	9.3	190	-45	212	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2629	68	874	68	11.4	163	-42	227	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2635	32	851	32	6.32	144	-42	215	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C
2636	46	859	46	8	146	-39	220	3,010

Synthetic biodegradable hydraulic oils

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2602	15	924	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2603	32	910	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C
2604	46	919	46	9.1	191	-42

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2555	32	853	32	5.5	105	-33	224

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2556	46	858	46	6.81	104	-30	238

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2557	68	862	68	8.9	102	-27	242

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2558	100	867	100	11.4	99	-27	254

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2559	150	876	150	15.7	108	-27	252

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2565	32	869	32	5.4	102	-33	219

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2566	46	875	46	6.8	104	-27	227

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

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2567	68	879	68	8.9	102	-27	240

Neste Hydraulic HLP ZFX 100

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
Bosch Rexroth RE 90 220
DIN 51506 VDL

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

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2568	100	885	100	11.3	98	-18	252

Synthetic hydraulic oils

Neste Hydraulic SYN 15

Synthetic hydraulic oil

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

- Very good performance at low temperatures
- Excellent shear resistance
- Excellent oxidation resistance
- Efficient protection against wear

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -30 °C
2587	15	833	15	4	174	-63	137	770

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -30 °C
2588	32	837	32	6.5	167	-54	215	2,550

Neste Biohydraulic HFDU 46

Flame retarding biodegradable hydraulic oil

Meets or exceeds the following quality criteria:
ISO 6743/4 HFDU
ISO 12922
Factory Mutual
SS 15 54 34 BV Miljöanpassad

- Reduces fire risk
- Suitable for high-pressure systems
- For mobile equipment and industrial use
- Environmentally friendly

Product number	ISO VG	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Ignition temperature °C
2600	46	920	47	9.4	190	-48	300	360

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.

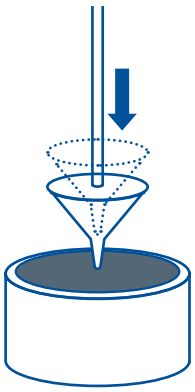
Depending on the demands of the lubrication target, you may choose a lubricating grease with optimal operating temperature, lubricating properties and penetration/viscosity.

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	

Vehicle lubricating greases

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	Density kg/m³ +25 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7010	900	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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7025	910	2	Lithium	>180	-30... +120	110

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7253	900	2	Lithium complex	>260	-30... +140	210

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7030	890	0	Anhydrous calcium	>120	-40... +120	1,350

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7032	900	2	Anhydrous calcium	>140	-30... +120	1,350

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7410	900	00	Lithium complex	>170	-40... +100	120

Neste Semilix

Semi-synthetic lubricating grease

Meets or exceeds the following quality criteria:
DIN 51502: KP1.5N-35
ISO 6743: ISO-L-XCDHB1.5

- Wide operating temperature range
- Good wear resistance and EP properties
- Good rust protection
- Excellent oxidation resistance

Product number	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7017	880	1.5	Lithium complex	>260	-35... +150	150

Industrial lubricating greases

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7110	940	0.5	Calcium/lithium complex	>260	-20... +140	850

Neste Allrex M

Molybdenum sulfide -containing general grease

Meets or exceeds the following quality criteria:
DIN 51502: KPF2K-30
ISO 6743: ISO-L-XCCIB2

- Withstands impact loads
- Good mechanical resistance
- Good rust prevention properties
- Good wear resistance and EP properties

Product number	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7015	950	2	Lithium	>180	-30... +120	200

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7020	920	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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7021	930	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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7022	950	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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7023	940	2.5	Lithium	>180	-30... +130	205

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7013	910	1.5	Lithium complex	>260	-30... +140	560

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7018	900	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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7019	910	2	Lithium complex	>260	-55... +120	45

Neste Keidi S

Lubricant for gang saw guides

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C
7156	886	280	11.5

Neste Keidi W

Lubricant for gang saw guides

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C
7159	884	170	11.1

Neste Avora Spray

Sprayable grease for open gears

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

Product number
7111

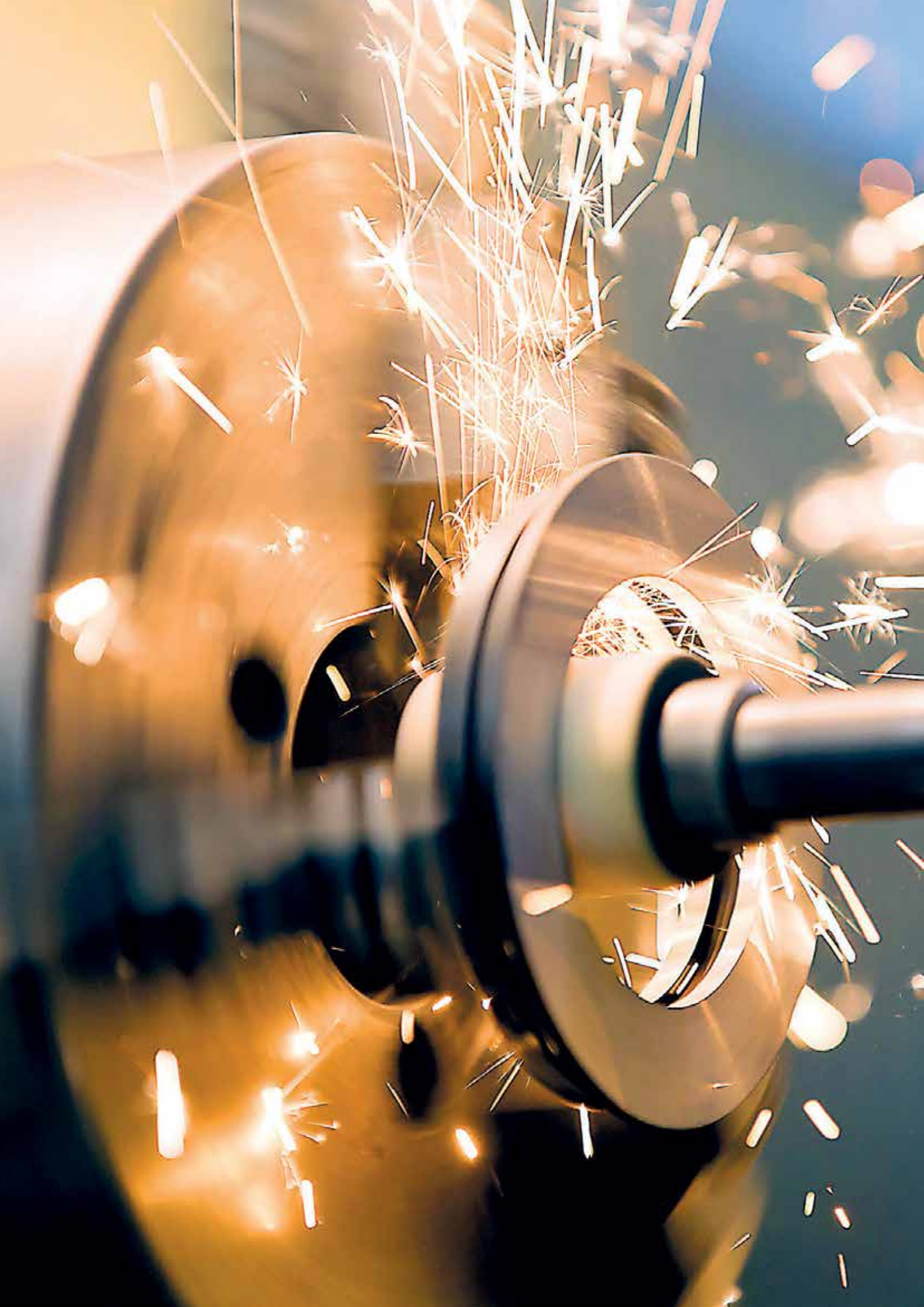
Neste Contrex

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	Density kg/m³ +20 °C	NLGI hardness	Thickener type	Drop point °C	Operating temperature range °C	Base oil viscosity cSt
7014	940	2	Lithium	>180	-30... +110	110



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

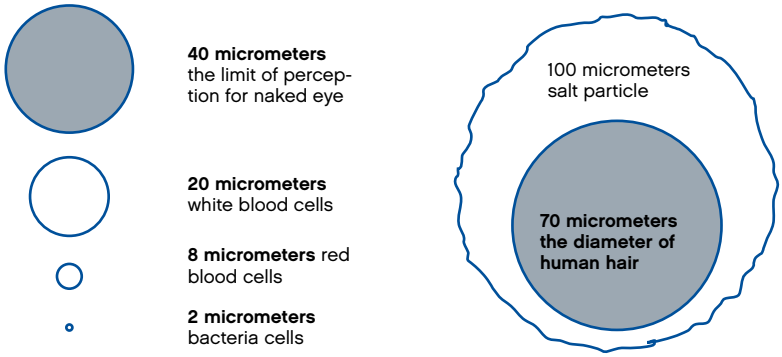
- Whether the oil system has been properly emptied
- Oil filtering when topping up
- Be careful not to over- or under-fil the system
- Using the right product
- Impurities, contamination
- Do not forget to check/change oil filters
- Breather air filter
- Entry of water into the system, draining
- Regular 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 baffle plate – cylinder group	10–30
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.

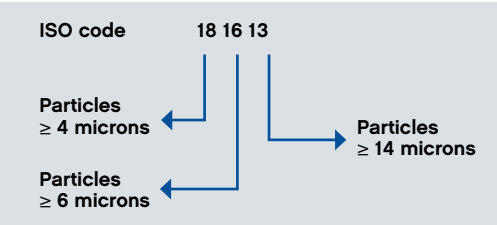


Entry of dirt, for example, in circulation lubrication or hydraulic system is prevented by flushing it before commissioning with new filtered hydraulic oil. If possible, the system is filled through its own filters or a separate filter unit. All maintenance and repair work must be performed in clean 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
- Oxy Good oxidation resistance
- Good air separation ability
- Good water separation ability

Product number	ISO VG class	ISO-L-TGA class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3084	32	32	874	32	5.2	102	-33	221

Neste Turbine 46

Turbine oil

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

- 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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3085	46	46	877	46	6.8	101	-33	225

Neste Turbine 68

Turbine oil

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

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

Product number	ISO VG class	ISO-L-TGA class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3086	68	68	878	68	8.8	101	-30	243

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

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

Product number	ISO VG class	ISO-L-TGE class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3096	32	23	845	32	5.8	127	-12	211

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

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

Product number	ISO VG class	ISO-L-TGE class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3097	46	46	843	46	7.8	138	-24	218

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

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

Product number	ISO VG class	ISO-L-TGE class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3098	68	68	845	68	10.7	147	-33	218

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3093	32	32	845	32	5.8	127	-12	211

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3094	46	46	843	46	7.8	138	-24	218

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3095	68	68	845	68	10.7	147	-33	218

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3081	46	848	49	7.9	130	-39	240

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2980	150	889	150	14.7	97	-12	257

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
2981	220	894	220	18.9	96	-12	270

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3031	68	881	68	8.9	101	-21	224

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3032	100	885	100	11.3	97	-18	238

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3033	150	889	150	14.7	95	-12	236

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3034	220	893	220	19.2	96	-12	232

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3036	460	900	460	30.9	97	-12	283

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3043	68	840	68	10.4	140	-57	230

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 4 0 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3052	100	842	100	14.3	149	-51	235

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3053	150	843	150	20.2	156	-51	236

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3064	220	843	220	27.7	162	-51	260

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3076	320	844	320	37.4	165	-42	260

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3077	460	845	460	50.7	173	-39	260

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3310	22	22	852	22	4.5	118	-39	195

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3320	68	68	878	68	8.8	102	-30	235

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3330	150	150	890	150	14.8	98	-33	243

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3340	320	320	896	320	23	96	-18	296

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3395	10	837	10	2.7	114	-48	152

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3410	68	880	68	8.8	102	-33	242

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3421	100	883	100	11.4	100	-30	247

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3430	150	886	150	14.9	98	-21	262

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3440	220	892	220	19.0	97	-24	226

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3450	320	898	320	24.2	96	-12	256

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3460	460	902	460	31.1	98	-15	278

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3473	680	902	680	41.7	102	-12	268

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3500	68	863	68	11.1	154	-45	219

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3501	100	871	100	15.3	160	-45	223

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3502	150	876	150	20.6	159	-39	231

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

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3503	220	888	223	27.7	161	-39	223

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3504	320	892	320	37	165	-39	218

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3505	460	898	465	49	165	-36	215

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3506	680	908	688	66	167	-33	226

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3480	100	840	100	14.7	152	-55	220

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3482	150	848	150	20. 1	155	-48	266

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3485	229	849	220	26.5	158	-48	238

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3490	320	850	320	36.2	160	-48	250

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3499	460	852	460	47.0	160	-39	280

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

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3492	1000	860	1000	84.8	167	-27	236

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4068	842	16	3.7	114	-27	208

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4611	32	830	32	5.9	135	-55	242

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4613	68	835	67	10.1	136	-53	265

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3810	32	32	872	32	5.6	114	-39	215

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3812	68	68	880	68	9	106	-30	239

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3815	220	220	893	220	19.1	97	-9	256

Heat transfer oils

Neste Therm 4

Heat transfer oil

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3380	850	17	3.7	105	-27	200

Neste Therm 5

Heat transfer oil

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

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3381	872	31	5.3	104	-12	220

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3382	833	47	7.9	140	-57	262

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
- Excellent wear resistance

Product number	ISO VG class	ISO-L-PBC class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3540	46	46	871	46	7.2	121	-39	193

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3541	100	100	882	100	11.6	104	-24	225

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3550	68	870	68	8.8	102	-27	254

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3551	100	882	100	11.4	102	-27	268

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3552	150	885	150	14.7	96	-21	280

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3550	220	891	220	19	97	-21	270

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3555	46	857	45	7,5	133	-39	240

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3556	68	862	68	9,8	128	-39	234

Neste Compressor S 32

Fully synthetic compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Excellent oxidation resistance
- Excellent wear resistance
- Very low carbon build-up
- Ashless

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3559	32	842	32	6.1	140	-60	238

Neste Compressor S 46

Fully synthetic compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Excellent oxidation resistance
- Excellent wear resistance
- Very low carbon build-up
- Ashless

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3560	46	846	46	7.9	141	-57	240

Neste Compressor S 68

Fully synthetic compressor oil

Meets or exceeds the following quality criteria:
DIN 51506 VDL

- Excellent oxidation resistance
- Excellent wear resistance
- Very low carbon build-up
- Ashless

Product number	ISO VG class	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
3561	68	848	68	10.9	152	-51	246

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	Density kg/m³ +20 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -30 °C	Dielectric strength kV
4140	877	7.6	-63	142	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	Density kg/m³ +20 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -40 °C	Dielectric strength kV
4141	864	3.2	-70	96	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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Pour point °C	Flash point (COC) °C
4110	822	3.4	1.4	-48	85

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Pour point °C	Flash point (COC) °C
4111	832	6.3	2	-48	94

Anti-corrosion agents

Neste Antirust LO

Anti-corrosion oil

- Efficient rust protection
- Easy to apply
- Also suitable for aluminum
- Easy to remove by solvent wash

Product number	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4830	876	35	5.9	111	-36	228

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4833	30	888	94.2	11.2	105	-33	246

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	Density kg/m³ +15 °C	Viscosity mm²/s (cSt) 40 °C	100 °C	Viscosity index	Pour point °C	Flash point (COC) °C
4710	819	16.8	3.8	124	-69	222

Biodegradable saw chain oil

Neste Biosaw

Biodegradable saw chain oil

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

Product number	Density kg/m³ +15 °C	Viscosity index	Pour point °C	Flash point (COC) °C	Cold viscosity cSt -20 °C	Biodegradability OECD 301 F
5510	920	70	-39	300	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

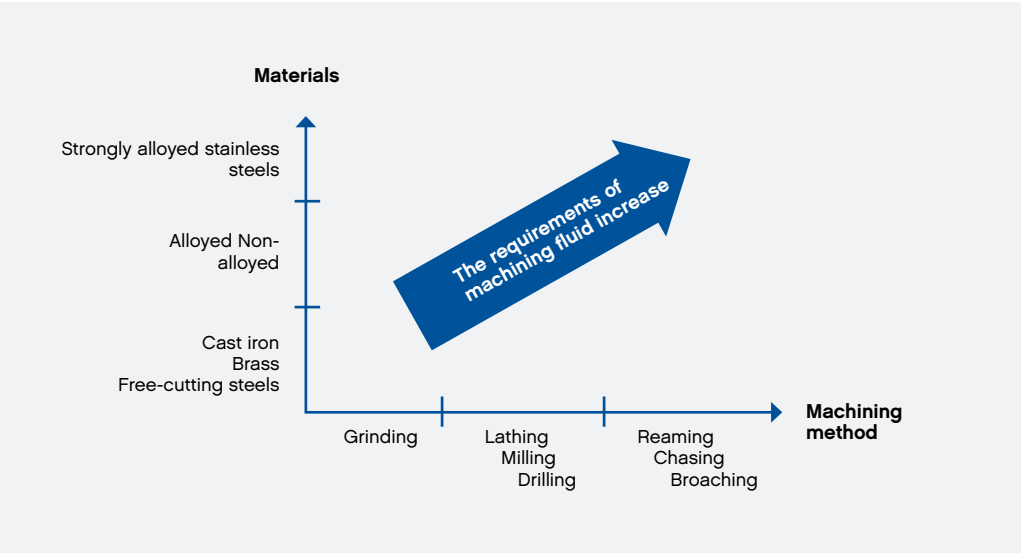
Typical additives used in machining fluids include

- 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	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	Flash point (COC) °C
3995	877	15	162

Neste Cutting Neatoil 200

Machining oil for steel grades

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

Product number	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	Flash point (COC) °C
4070	855	16	180

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	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	Flash point (COC) °C
4004	863	31	226

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	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	Flash point (COC) °C
4006	840	13	183

Neste Cutting 100

Emulsifiable machining fluid

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

Product number	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	pH (5%)	Refractometer index
3970	910	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	Density kg/m³ +15 °C	Viscosity cSt / 40 °C	pH (5%)	Refractometer index
3973	1,030	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.

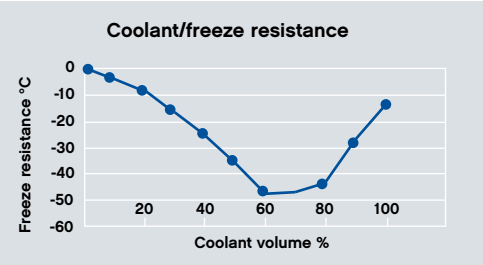
Change interval

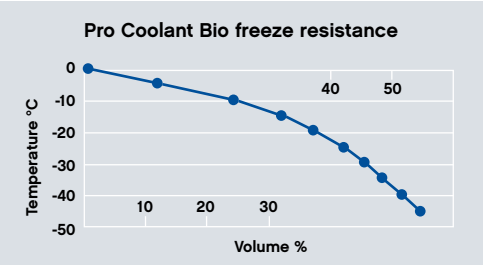
The additives used in the coolant dictate its performance, which together with the engine manufacturer's recommendations determine the change interval.

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 B

Long change interval multi-brand coolant concentrate

Meets or exceeds the following quality criteria:
BMW N 600 69.0
Deutz: H-LV 0161 0188
MAN 324-NF
MB-Approval 325.0
MB 326.0
MTU: MTL 5048
Opel/GM: B 040 0240
Porsche: For 924, 928, 944, 968
Saab: 6901599
VW TL-774-C (G 11)
ASTM D3306 Type I
ASTM D4985
BS 6580:2010
JIS K 2234:2006
SAE J1034

- Hybrid technology
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7770	1,122	Cyan	-38 °C

Neste Pro+ Coolant B Ready

Long change interval multi-brand coolant, ready to use

Meets or exceeds the following quality criteria:
BMW N 600 69.0
Deutz: H-LV 0161 0188
MAN 324-NF
MB 325.0
MB 326.0
MTU: MTL 5048
Opel/GM: B 040 0240
Porsche: For 924, 928, 944, 968
Saab: 6901599
VW TL-774-C (G 11)
ASTM D3306 Type III
ASTM D4985
BS 6580:2010
JIS K 2234:2006
SAE J1034

- Hybrid technology
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7771	1,072	Cyan	-38 °C

Neste Pro+ Coolant M

Long change interval multi-brand coolant concentrate

Meets or exceeds the following quality criteria:
Cummins CES 14603
Deutz DQC CC-14
Liebherr Minimum LH-01-COL3A
MAN 324 Type Si-OAT
MB 326.5
MB 326.6
MB-Approval 325.5
MB-Approval 325.6
MTU MTL 5048
Porsche: MY 1996-
Scania 2008-
VW TL-774G (G12++)
ASTM D3306 Type I
ASTM D4985
BS 6580:2010
JIS K 2234:2006
SAE J1034

- Hybrid-organic acid technology
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7774	1,125	Purple	-38 °C

Neste Pro+ Coolant M Ready, Coolant M 50 %

Long change interval multi-brand coolant, ready to use

Meets or exceeds the following quality criteria:
Cummins CES 14603
Deutz DQC CC-14
Liebherr Minimum LH-01-COL3A
MAN 324 Type 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
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7775	1,062	Purple	-38 °C

Neste Pro+ Coolant W

Long change interval coolant concentrate

Meets or exceeds the following quality criteria:
TL-774J (G13)
TL-774C (G11)
TL-774F (G12+)
TL-774G (G12++)

- Hybrid technology
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7776	1,140	Red	-35 °C

Neste Pro+ Coolant W Ready

Long change interval coolant, ready to use

Meets or exceeds the following quality criteria:
TL-774J (G13)
TL-774C (G11)
TL-774F (G12+)
TL-774G (G12++)

- Hybrid technology
- Nitrite-free
- Excellent freeze resistance
- Brilliant corrosion resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7777	1,077	Red	-35 °C

Neste Pro Coolant XLC

Long change interval multi-brand coolant concentrate

Meets or exceeds the following quality criteria:
Deutz DQC CB-14
Ford WSS-M97B44-D
GM 6277M
Jaguar CMR 8229
Jaguar, Land Rover, STJLR 651.5003
JDM H5
Komatsu 07.892 (2009)
MACK 014 GS 17009
MAN 324 Type SNF
MAT3624
MB-Approval 325.3
MB 326.3
MEZ MN 121 D
MTL 5048
Renault 41-01-001/- -S Type D
Saab B 040 1065
VW TL-774 F (G12+)

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7767	1,113	Red	-40 °C

Neste Pro Coolant XLC Ready, Coolant XLC 50 %

Long change interval multi-brand coolant, ready to use

Meets or exceeds the following quality criteria:
Deutz DQC CB-14
Ford WSS-M97B44-D
GM 6277M
Jaguar CMR 8229
Jaguar, Landrover, STJLR 651.5003
JDM H5
Komatsu 07.892 (2009)
MACK 014 GS 17009
MAN 324 Type SNF
MAT3624
MB 325.3
MB 326.3
MEZ MN 121 D
MTL 5048
Renault 41-01-001/- -S Type D
Saab B 040 1065
VW TL-774 F (G12+)

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7768	1,068	Red	-40 °C

Neste Pro Coolant K

Long change interval multi-brand coolant concentrate

Meets or exceeds the following quality criteria:
Ford specification WSS-M97B44-D
Volvo VCS

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7772	1,113	Yellow	-40 °C

Neste Pro Coolant K Ready

Long change interval multi-brand coolant, ready to use

Meets or exceeds the following quality criteria:
Ford specification WSS-M97B44-D
Volvo VCS

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7778	1,068	Yellow	-40 °C

Neste Pro Coolant N

Long change interval multi-brand coolant concentrate

Meets or exceeds the following quality criteria:
Fiat 9.55523
Honda type 2
Mazda FL22
Nissan Antifreeze Coolant
Renault Glaceol RX type D
Subaru Coolant 16218
Suzuki Longlife Coolant

Toyota TSK 2601G-8A
MB 325.3
Mitsubishi
VW TL 774-D/F (G12/G12+)
BS 6580:2010
ASTM D3306 Type I
ASTM D4985
JIS K 2234:2006
SAE J1034

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7765	1,124	Purple	-38 °C

Neste Pro Coolant N Ready

Long change interval multi-brand coolant, ready to use

Meets or exceeds the following quality criteria:
Fiat 9.55523
Honda type 2
Mazda FL22
Nissan Antifreeze Coolant
Renault Glaceol RX type D
Subaru Coolant 16218
Suzuki Longlife Coolant

Toyota TSK 2601G-8A
MB 325.3
Mitsubishi
VW TL 774-D/F (G12/G12+)
BS 6580:2010
ASTM D3306 Type III
ASTM D4985
JIS K 2234:2006
SAE J1034

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7766	1,073	Purple	-38 °C

Neste Special Coolant

Coolant concentrate

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

Good freeze resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7756	1,131	Green	-35 °C

Neste Special Coolant Ready

Ready-to-use coolant

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

Good freeze resistance

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7757	1,067	Green	-35 °C

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

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7760	1,042	Green	-38 °C

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

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

Product number	Density kg/m³	Color	Freeze protection of the coolant diluted for use:
7761	1,039	Green	-38 °C

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	Density kg/m³	Cold viscosity cP/-40 °C	Boiling point:
7921	1,060	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

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 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

Product number	Density kg/m³	Urea content:
7862	1,089	32.5% by weight

- 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

Detergents

Neste Shampoo

Vehicle and machine detergent

Product number	Dosing:
7591	5–20%

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

Neste PreWash

Pre-wash agent for vehicles

Product number
7600

- Efficient removal of grease and bitumen
- Readily biodegradable

Other products

Neste Pro 4T small-engine gasoline

Alkylate gasoline for four-stroke engines

Product number
7960

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

Neste Pro 2T small-engine gasoline

Alkylate gasoline for two-stroke engines

Product number
7961

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

Neste Valopetroli

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

Product number
7652

- Almost odorless
- Clean combustion

Solvents

We provide clean hydrocarbon-based solvents for industrial use. Typical uses include paint and glue production, cleaning, grease removal and extraction processes and various uses in rubber industry. Solvents are available in pre-packaged and bulk deliveries.

Nessol solvents

Nessol Heptane

Heptane-type quickly evaporating aromatics-free hydrocarbon solvent, "purified gasoline".

Product number
1370

Nessol D40

White spirit -type hydrocarbon solvent, also known as mineral spirit and petroleum spirit.

Product number
1373

Nessol D60

Specially refined slowly evaporating aromatics-free hydrocarbon solvent.

Product number
1374

Nessol 40

Specially refined white spirit -type aromatics-free hydrocarbon solvent.

Product number
1371

Emulsifiable hydrocarbon solvents

Nessol 40E

Hydrocarbon solvent quickly emulsifying in water, cleans surfaces of road salt, bitumen, grease and other dirt.

Product number
1372

Nessol D60E

Aromatics-free slowly evaporating hydrocarbon solvent emulsified in water, which can be used as is or mixed with water. Enables rinsing with water. Separates in phases in 45 minutes.

Product number
1375

Printing ink detergents

Neste LIPA 1

Easily evaporating aromatics-free printing ink detergent.

Product number
7571

Neste LIPA 2

Slowly evaporating aromatics-free printing ink detergent. Evaporation time twice of that of LIPA 1.

Product number
7572

Isopropanol

Neste Isopropanoli

Colorless liquid, miscible with water and most organic solvents in all ratios.

Product number
7505

New product names

Old product name	Old product number	New product name	New product number
Neste Pro+ F 0W-30	1182	**Neste Pro+ F 0W-30**	**1182**
Neste City Pro F 5W-20	0132	**Neste Pro+ F 5W-20**	**1176**
Neste City Pro 0W-20	0130	**Neste Pro+ V 0W-20**	**1177**
Neste City Pro W Longlife III 5W-30	0138	**Neste Pro+ W LL-III 5W-30**	**1178**
Neste City Standard 5W-30	0445	**Neste Pro F 5W-30**	**1175**
Neste City Pro C2 0W-30	0141	**Neste Pro C2 0W-30**	**1171**
Neste City Pro C2 5W-30	0139	**Neste Pro C2 5W-30**	**1172**
		Neste Pro C2/C3 5W-30	**1184**
Neste City Pro 5W-40	0135	**Neste Pro C3 5W-40**	**1173**
Neste City Pro C4 5W-30	0140	**Neste Pro C4 5W-30**	**1174**
		Neste Pro 0W-20	**1183**
Neste City Pro A5/B5 0W-30	0137	**Neste Pro 0W-30**	**1167**
Neste City Pro 0W-40	0134	**Neste Pro 0W-40**	**1168**
Neste City Pro LL 5W-30	0133	**Neste Pro 5W-30**	**1169**
Neste City Standard 5W-40	0441	**Neste Premium+ 5W-40**	**1165**
Neste 1 5W-50	0150	**Neste Premium+ 5W-50**	**1166**
Neste City Standard 10W-40	0442	**Neste Premium+ 10W-40**	**1163**
Neste Premium 5W-40	0530	**Neste Premium 5W-40**	**1162**
Neste Special 10W-30	0715	**Neste Special 10W-30**	**1179**
Neste Special 30	0731	**Neste Special 30**	**1181**
Neste Turbo NEX 10W-40	1121	**Neste Turbo+ NEX 10W-40**	**1869**
Neste Turbo NEX 15W-40	1122	**Neste Turbo+ NEX 15W-40**	**1870**
		Neste Turbo+ E6 5W-30	**1871**
Neste Turbo E6 10W-40	1242	**Neste Turbo+ E6 10W-40**	**1868**
Neste Turbo Super 5W-30	1030	**Neste Turbo+ 5W-30**	**1867**
Neste Turbo Super 10W-40	1040	**Neste Turbo+ 10W-40**	**1866**
Neste Turbo LXE 10W-30	1232	**Neste Turbo LXE 10W-30**	**1862**
Neste Turbo LXE 10W-40	1246	**Neste Turbo LXE 10W-40**	**1863**
Neste Turbo LXE 15W-40	1245	**Neste Turbo LXE 15W-40**	**1864**
Neste Turbo S 15W-40	1041	**Neste Turbo S 15W-40**	**1865**
Neste Diesel 10W-30	1430	**Neste Diesel 10W-30**	**1856**
Neste Diesel 15W-40	1440	**Neste Diesel 15W-40**	**1857**
Neste Diesel 10W	1611	**Neste Diesel 10W**	**1855**
Neste Diesel 20W-30	1621	**Neste Diesel 20W-30**	**1858**
Neste Diesel 30	1631	**Neste Diesel 30**	**1859**
Neste Farm Universal 10W-30	1832	**Neste Farm Universal 10W-30**	**1861**
Neste MC Pro 10W-40	0800	**Neste Pro Bike 10W-40**	**1170**
Neste 2-T Super Racing	1935	**Neste Super Racing 2T**	**1941**
Neste 2-T Super	1930	**Neste Super 2T**	**1939**
Neste 2-T Marine	1915	**Neste Marine 2T**	**1938**
Neste Hypoidi TDL S 75W-90	2408	**Neste Pro Axle TDL 75W-90**	**2152**
Neste Hypoidi S 75W-90	2009	**Neste Pro Axle 75W-90**	**2151**
Neste Hypoidi S 75W-140	2014	**Neste Pro Axle 75W-140**	**2150**
Neste Hypoidi LF 80W(77W)-90	2424	**Neste Premium Axle 80W-90**	**2149**
Neste Hypoidi LF 80W-140	2426	**Neste Premium Axle 80W-140**	**2148**
Neste Hypoidi MP 80W-90	2419	**Neste Axle 80W-90**	**2146**
Neste Hypoidi MP 80W-140	2214	**Neste Axle 80W-140**	**2145**
Neste Hypoidi LS 80W-90	2428	**Neste Axle LS 80W-90**	**2147**
Neste Pro Gear V 75W-80	2111	**Neste Pro Gear V 75W-80**	**2111**
Neste Gear S 75W-80	2108	**Neste Pro Gear 75W-80**	**2112**
Neste Gear S 75W-90	2109	**Neste Pro Gear 75W-90**	**2113**
Neste Gear EP 80W-90	2508	**Neste Gear GL-4 80W-90**	**2120**
Neste Gear 80W-90	2509	**Neste Gear GL-1 80W-90**	**2121**
Neste Gear MJ Super	2238	**Neste Premium Gear UTTO**	**2137**
Neste Gear MJ	2541	**Neste Gear UTTO**	**2135**
Neste Gear TO-4 10W	2241	**Neste Gear TO-4 10W**	**2130**
Neste Gear TO-4 30	2243	**Neste Gear TO-4 30**	**2131**

Old product name	Old product number	New product name	New product number
Neste ATF Multi	2940	**Neste ATF Multi**	**2160**
Neste ATF CVT	2941	**Neste ATF CVT**	**2163**
Neste ATF-S	2010	**Neste ATF-S**	**2161**
Neste ATF-X	2930	**Neste ATF-X**	**2162**
Neste Hydrauli 15 Arctic	3248	**Neste Hydraulic 15 Arctic**	**2615**
Neste Hydrauli 28 Arctic	3249	**Neste Hydraulic 28 Arctic**	**2616**
Neste Hydrauli 15 Super	3201	**Neste Hydraulic 15 Super**	**2625**
Neste Hydrauli 22 Super	3251	**Neste Hydraulic 22 Super**	**2626**
Neste Hydrauli 32 Super	3230	**Neste Hydraulic 32 Super**	**2627**
Neste Hydrauli 46 Super	3253	**Neste Hydraulic 46 Super**	**2628**
Neste Hydrauli 68 Super	3254	**Neste Hydraulic 68 Super**	**2629**
Neste Hydrauli 32	3206	**Neste Hydraulic 32**	**2635**
Neste Hydrauli 46	3207	**Neste Hydraulic 46**	**2636**
Neste Biohydrauli SE 15	3210	**Neste Biohydraulic SE 15**	**2602**
Neste Biohydrauli SE 32	3235	**Neste Biohydraulic SE 32**	**2603**
Neste Biohydrauli SE 46	3243	**Neste Biohydraulic SE 46**	**2604**
Neste Paine 32	3111	**Neste Hydraulic HLP 32**	**2555**
Neste Paine 46	3119	**Neste Hydraulic HLP 46**	**2556**
Neste Paine 68	3129	**Neste Hydraulic HLP 68**	**2557**
Neste Paine 100	3139	**Neste Hydraulic HLP 100**	**2558**
Neste Paine 150	3149	**Neste Hydraulic HLP 150**	**2559**
Neste Paine 32 ZFX	3121	**Neste Hydraulic HLP 32 ZFX**	**2565**
Neste Paine 46 ZFX	3122	**Neste Hydraulic HLP 46 ZFX**	**2566**
Neste Paine 68 ZFX	3123	**Neste Hydraulic HLP 68 ZFX**	**2567**
Neste Paine 100 ZFX	3124	**Neste Hydraulic HLP 100 ZFX**	**2568**
Neste Synhydrauli 15	3203	**Neste Hydraulic SYN 15**	**2587**
Neste Synhydrauli 32	3286	**Neste Hydraulic SYN 32**	**2588**
Neste Biohydrauli HFDU 46	3244	**Neste Biohydraulic HFDU 46**	**2600**
Neste MP Grease	7010	**Neste MP Grease**	**7010**
Neste Molygrease	7025	**Neste Molygrease**	**7025**
Neste Superlix EP 2	7253	**Neste Superlix EP 2**	**7253**
		Neste OH Grease 0	**7030**
Neste OH Grease	7026	**Neste OH Grease 2**	**7032**
Neste Center Grease 00 EP	7410	**Neste Center Grease 00 EP**	**7410**
Neste Semilix	7017	**Neste Semilix**	**7017**
Neste Avora	7110	**Neste Avora**	**7110**
Neste Allrex M	7015	**Neste Allrex M**	**7015**
Neste Allrex EP 0	7020	**Neste Allrex EP 0**	**7020**
Neste Allrex EP 1	7021	**Neste Allrex EP 1**	**7021**
Neste Allrex EP 2	7022	**Neste Allrex EP 2**	**7022**
Neste Allrex EP 3	7023	**Neste Allrex EP 3**	**7023**
Neste Templex	7013	**Neste Templex**	**7013**
Neste Semilix	7017	**Neste Semilix**	**7017**
Neste Synlix	7018	**Neste Synlix**	**7018**
Neste Synlix LT	7019	**Neste Synlix LT**	**7019**
Neste Keidi S	7156	**Neste Keidi S**	**7156**
Neste Keidi W	7159	**Neste Keidi W**	**7159**
Neste Avora-Aerosoli	7859	**Neste Avora Spray**	**7111**
Neste Contrex	7014	**Neste Contrex**	**7014**
Neste Turbine 32	3000	**Neste Turbine 32**	**3084**
Neste Turbine 46	3010	**Neste Turbine 46**	**3085**
Neste Turbine 68	3024	**Neste Turbine 68**	**3086**
Neste Cutting Neatoil 15	3995	**Neste Cutting Neatoil 15**	**3995**
Neste Turbine GT 32	3096	**Neste Turbine GT 32**	**3096**
Neste Turbine GT 46	3097	**Neste Turbine GT 46**	**3097**
Neste Turbine GT 68	3098	**Neste Turbine GT 68**	**3098**
Neste Cutting Neatoil 200	4070	**Neste Cutting Neatoil 200**	**4070**

Old product name	Old product number	New product name	New product number
Neste Turbine GT 32 EP	3093	**Neste Turbine GT 32 EP**	**3093**
Neste Turbine GT 46 EP	3094	**Neste Turbine GT 46 EP**	**3094**
Neste Turbine GT 68 EP	3095	**Neste Turbine GT 68 EP**	**3095**
Neste Cutting Neatoil K1	4004	**Neste Cutting Neatoil K1**	**4004**
Neste Hydro Turbine 46	3080	**Neste Turbine Hydro 46**	**3081**
Neste Cutting Neatoil MT 13	4006	**Neste Cutting Neatoil MT 13**	**4006**
Neste Paperikone 150 D	3050	**Neste Paper Mill 150 D**	**2980**
Neste Paperikone 220 D	3065	**Neste Paper Mill 220 D**	**2981**
Neste Cutting 100	3970	**Neste Cutting 100**	**3970**
Neste Beta 68 ZFX	3031	**Neste Beta 68 ZFX**	**3031**
Neste Beta 100 ZFX	3032	**Neste Beta 100 ZFX**	**3032**
Neste Beta 150 ZFX	3033	**Neste Beta 150 ZFX**	**3033**
Neste Beta 220 ZFX	3034	**Neste Beta 220 ZFX**	**3034**
Neste Beta 460 ZFX	3036	**Neste Beta 460 ZFX**	**3036**
Neste Cutting F 110	3973	**Neste Cutting F 110**	**3973**
Neste Lamda 68 ZF	3043	**Neste Lamda 68 ZF**	**3043**
Neste Lamda 100 ZF	3052	**Neste Lamda 100 ZF**	**3052**
Neste Lamda 150 ZF	3053	**Neste Lamda 150 ZF**	**3053**
Neste Lamda 220 ZF	3064	**Neste Lamda 220 ZF**	**3064**
Neste Lamda 320 ZF	3076	**Neste Lamda 320 ZF**	**3076**
Neste Lamda 460 ZF	3077	**Neste Lamda 460 ZF**	**3077**
Neste Kierto 22	3309	**Neste Circlube 22**	**3310**
Neste Kierto 68	3319	**Neste Circlube 68**	**3320**
Neste Kierto 150	3329	**Neste Circlube 150**	**3330**
Neste Kierto 320	3339	**Neste Circlube 320**	**3340**
Neste Kara 10	3106	**Neste Spindle 10**	**3395**
Neste Vaihteisto 68 EP	3409	**Neste Industrial Gear 68 EP**	**3410**
Neste Vaihteisto 100 EP	3419	**Neste Industrial Gear 100 EP**	**3421**
Neste Vaihteisto 150 EP	3429	**Neste Industrial Gear 150 EP**	**3430**
Neste Vaihteisto 220 EP	3439	**Neste Industrial Gear 220 EP**	**3440**
Neste Vaihteisto 320 EP	3449	**Neste Industrial Gear 320 EP**	**3450**
Neste Vaihteisto 460 EP	3459	**Neste Industrial Gear 460 EP**	**3460**
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Neste Industrial Gear NEX 100 EP	3501	**Neste Industrial Gear NEX 100 EP**	**3501**
Neste Industrial Gear NEX 150 EP	3502	**Neste Industrial Gear NEX 150 EP**	**3502**
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Neste Industrial Gear NEX 680 EP	3506	**Neste Industrial Gear NEX 680 EP**	**3506**
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Neste Vaihteisto S 150 EP	3481	**Neste Industrial Gear S 150 EP**	**3482**
Neste Vaihteisto S 220 EP	3484	**Neste Industrial Gear S 220 EP**	**3485**
Neste Vaihteisto S 320 EP	3489	**Neste Industrial Gear S 320 EP**	**3490**
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Neste Kompressori 220	3532	**Neste Compressor 220**	**3553**
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Neste Kompressori S 46	3498	**Neste Compressor S 46**	**3560**
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Neste Biocoolant Longlife Ready	7723	**Neste Pro Coolant Bio Ready**	**7761**
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		Neste Voltera Citrus Ready	**7642**
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