S-OIL LUBRICANTS

PRODUCT GUIDE



S-OIL
LUBRICANTS
PRODUCT GUIDE

lubricants@s-oil.com | www.s-oil7.com

S-OIL
LUBRICANTS PRODUCT GUIDE

S-OIL COMPANY 006 p

S-OIL E-COOLING SOLUTION 010 p

S-OIL 7 EV FLUID 014 p

S-OIL 7 PASSENGER CAR MOTOR OIL 016 p

S-OIL 7 HEAVY DUTY DIESEL OIL 040 p

S-OIL 7 MCO & GEAR OIL & SPECIALTY 058 p

S-OIL INDUSTRIAL OIL 082 p

CERTIFICATE 112 p

To be the most competitive, innovative and trusted energy & chemical company

S-OIL Corporation was established in 1976 and cultivated management characteristics with a mobility to match the international generation, and a management strategy for its profit-base to grow as a competitive oil-refining company.

The company has facilities that produce 44.7 thousand barrels a day of lube base oils, 1,850 thousand tons per year of PX products, and crude oil refining facilities of 669,000 barrels a day in the Onsan Industrial Complex, South Korea.

The company is pursuing the construction of petrochemical production facilities to diversify its business portfolio and strengthen the foundation for sustainable growth in response to the global long-term energy transition trend.

Through this project, the company plans to improve energy efficiency and reduce carbon emissions while constructing, by the second half of 2026, the world's largest single-unit steam cracker and polymer facilities producing high value-added petrochemical products.

Upon completion of the project, the company is expected to additionally produce approximately 3.2 million tons of petrochemical products annually, increasing the proportion of petrochemical products in its overall production mix from 12% to 25%.

The company exports more than 60% of products by concentrating on entering the overseas market. Now, the company has a leading role in changing to a high value export company from the local oil industry.

S-OIL

Crude Oil Refinery Capability

669 KBD

Lube Base Oil Production Capability

44.7 KBD

PX Production Capability

1,850 KT/year

Olefin (PP/PO) Production Capacity

765 KT/year



S-OIL 50th Anniversary

The value of resources newly discovered from S-OIL

S-OIL's adventurous 50-year journey proved that value of resources is measured not by oil reserves or numbers but by our imagination and action.

Our aspirations to innovate the value of resources will go beyond the past 50 years towards the next 50 years.

S-OIL

50 years

1976
Company foundation
Broke ground of Onsan Refiner

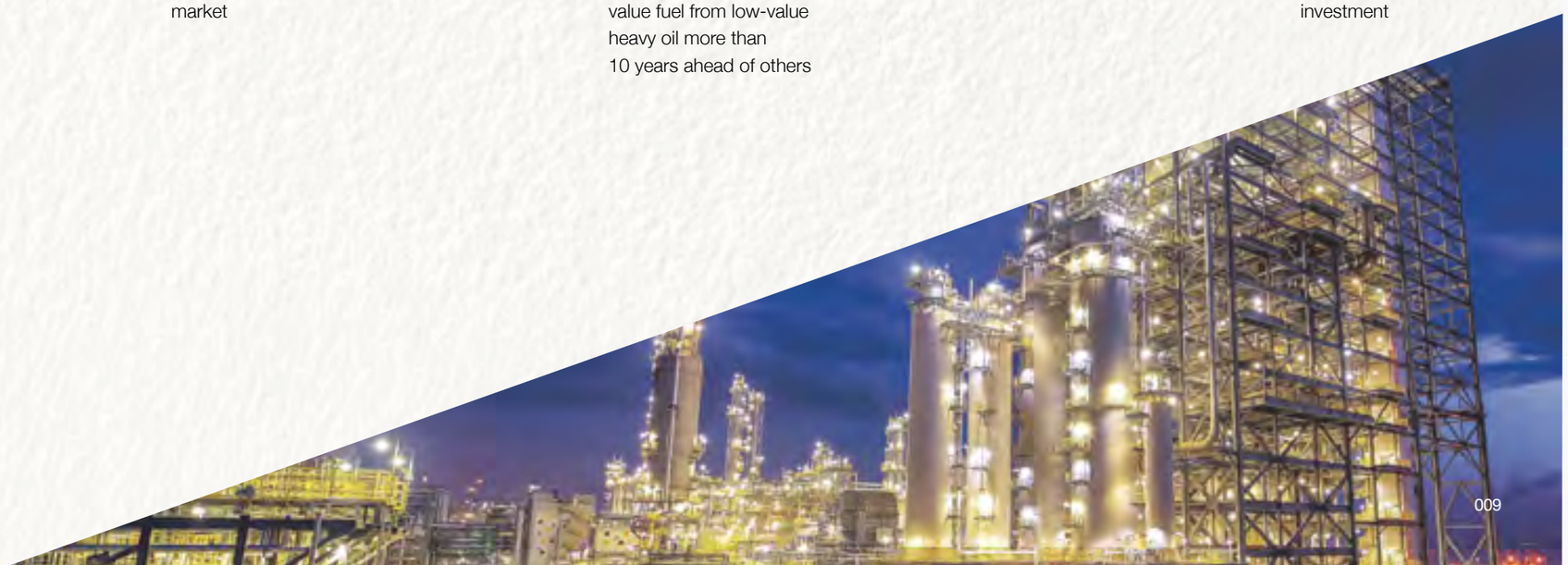
1980
First lube plant in Korea
Expanded fuel products' overseas sales as strategic export products beyond domestic market

1997
Upgrading facilities known as the 'Aboveground Oil Field'
Invested in upgrading facilities to boost production of high added-value fuel from low-value heavy oil more than 10 years ahead of others

2011
Petrochemical expansion
Built world's largest single-location PX plant and expanded beyond fuel

2018
Refining-petrochemical complex
Expanded from fuel to petrochemical
Started large petrochemical complex

2026
Shaheen Project at the center of global attention
Jump to the next level with Korea's largest-ever petrochemical investment



STAY COOL, STAY POWERED, STAY AHEAD

HIGH-PERFORMANCE IMMERSION COOLING FOR DATA CENTERS AND ENERGY STORAGE SYSTEMS

S-OIL E-COOLING SOLUTION DATACENTER



Immersion Cooling Fluids For Efficient
Thermal Management Of Data Center



PRODUCT USE

· Datacenter
· Versatile applications

PRODUCT PERFORMANCE

· Chemically stable and non-corrosive, formulated with high-purity base oils
· Excellent dielectric performance and long service life
· Superior compatibility with electronic components, metals, and rubber materials
· Enhanced cooling efficiency and reduced power consumption
· Protection against dust and moisture

TYPICAL PROPERTIES

PROPERTIES	UNITS	DATACENTER 1	DATACENTER 2	DATACENTER 3
Viscosity at 40°C	cSt	8.00	13.24	40.53
Flash Point	°C	170	206	264
Breakdown Voltage	kV	57.9	60.5	76.2
Thermal Conductivity at 40°C	W/m·K	0.131	0.136	0.151
Volume resistivity at 25°C	Ω·m	1.64 x 10^12	9.07 x 10^12	2.26 x 10^13
Specific heat at 40°C	kJ/kg·K	1.94	2.00	2.17

S-OIL E-COOLING SOLUTION ESS(ENERGY STORAGE SYSTEM)



Immersion Cooling Fluids For Efficient
Thermal Management Of Batteries and Electrical Equipment



PRODUCT USE

· ESS and EV applications
· UPS applications

PRODUCT PERFORMANCE

· Chemically stable and non-corrosive, formulated with high-purity base oils
· Excellent dielectric performance and long service life
· Superior compatibility with electronic components, metals, and rubber materials
· Enhanced cooling efficiency
· Prevention of battery thermal runaway and fire hazards
· Protection of electrical equipment from dust and moisture

TYPICAL PROPERTIES

PROPERTIES	UNITS	ESS1	ESS2	ESS3
Viscosity at 40°C	cSt	7.98	13.24	40.51
Flash Point	°C	171	206	264
Breakdown Voltage	kV	57.9	60.5	76.2
Thermal Conductivity at 40°C	W/m·K	0.131	0.136	0.153
Volume resistivity at 25°C	Ω·m	1.64 x 10^12	9.07 x 10^12	2.26 x 10^13
Specific heat at 40°C	kJ/kg·K	1.94	2.00	2.18



S-OIL 7 EV HYBRID



High-Performance 100% Synthetic Engine Oil
Eco-Friendly and Fuel-Saving Gasoline Hybrid Engine Oil

PRODUCT USE

- Suitable for Various types of Hybrid car (gasoline based)
- All passenger cars that run on gasoline
- All passenger cars that run on gasoline under the latest global emission regulations
- Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SQ, ILSAC GF-7 engine oil

PRODUCT PERFORMANCE

- This engine oil provides fuel efficiency improvements and a reduction in CO2 emissions
- This engine oil provides premium performance thanks to very stable and clean base oil properties
- High viscosity index ensures adequate oil film strength at hot operating condition
- S-OIL SEVEN RED#9 SQ is formulated with latest cleaning agents that help to remove dirt and deposits actively
- Eco-friendly engine oil with improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SQ, ILSAC GF-7A (0W-20)
API SQ ILSAC GF-7B (0W-16)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-16	38.7	7.5	165	-45	230
0W-20	44.4	8.4	170	-45	234



S-OIL 7 GOLD #9 PAO C3



100% PAO Engine Oil
For Passenger Cars Equipped With
Gasoline, Diesel and LPG Engines

PRODUCT USE

· All vehicles with gasoline, automotive diesel and LPG engines
· Vehicles with DOHC, Turbocharger, Direct Injection Systems, Catalytic Converters
· Diesel vehicles fitted with after-treatment devices including EGR and DPF

PRODUCT PERFORMANCE

· PAO base oil provides excellent low temperature fluidity, oxidation stability and thermal stability
· This low SAPS (Sulfated Ash, Phosphorus and Sulfur) engine oil provides long life for exhaust after-treatment devices including DPF
· Resistance of breakdown in hot operation condition ensures complete engine protection in harsh condition
· Superior fluidity property in exceptional cold condition and easy start
· Excellent clean up properties and stability help to reduce and remove dirt and sludge buildup

PERFORMANCE LEVEL

ACEA C3, API SN/CF, MB 229.31/229.51, BMW Long Life-04, VW 502.00/505.00

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-40 (100% PAO)	79.7	14.0	182	-42	246
5W-30 (Fully Synthetic)	70.8	12.1	169	-39	236

S-OIL 7 GOLD #9 PAO A3/B4



PAO Blended Fully Synthetic Engine Oil
For Passenger Cars Equipped With
Gasoline, Diesel and LPG Engines

PRODUCT USE

· All passenger car with gasoline, automotive diesel and LPG engines.
· Particularly passenger cars driving in modern star-stop traffic conditions
· Vehicles with DOHC, Turbocharger, Direct Injection Systems, Catalytic converters

PRODUCT PERFORMANCE

· PAO base oil provides excellent low temperature fluidity, oxidation stability and thermal stability
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· Excellent detergent sytstem removes dirt and deposits in engine and assures long oil and engine life
· Resistance of breakdown in hot operation condition ensures complete protection in harsh condition

PERFORMANCE LEVEL

ACEA A3/B4, API SN, MB 229.3, BMW Long Life-01, VW 501.01/502.00 / 505.00, GM-LL-B-025

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)
	40°C	100°C		
0W-40	77.6	13.7	182	L-40.0

S-OIL 7 GOLD #9 C3



Fully Synthetic Engine Oil
For Passenger Cars Equipped With
Gasoline, Diesel and LPG Engines

PRODUCT USE

· Passenger cars with gasoline and diesel engine
· Passenger car with DOHC, Turbocharger, CRDI, Catalytic converters
· Diesel vehicles equipped with after-treatment devices, EGR, DPF, etc

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for after treatment devices including diesel particulate filter
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN GOLD #9 C3's excellent clean up properties help to remove dirt and sludge from building up
· Improved fuel efficiency by minimization of frictionand sludge buildup

PERFORMANCE LEVEL

ACEA C3-16, API SN/CF, MB 229.51/229.52, BMW Long Life-04,
VW 502.00/505.00/505.01

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	68.0	11.9	172	-36	236
5W-40	79.2	13.6	176	-39	246

S-OIL 7 GOLD #9 C2



Fully Synthetic Engine Oil
For Passenger Cars Equipped With
Gasoline, Diesel and LPG Engines

PRODUCT USE

· Passenger cars with gasoline and diesel engine
· Vehicles with DOHC, Turbocharger, CRDI, Catalytic Converters
· Diesel vehicles equipped with after-treatment devices including EGR, DPF

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus and Sulfur) engine oil provides long life for exhaust after treatment devices including diesel particulate filter
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN GOLD #9 C2's excellent clean up properties help to remove dirt and sludge from building up
· Improved fuel efficiency by minimization of friction

PERFORMANCE LEVEL

ACEA C2, API SN(0W-30, SP(5W-20/5W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-30	57.8	10.8	180	-42	224
5W-20	52.9	9.0	151	-36	244

S-OIL 7 GOLD #9 C5/C6



Fully Synthetic Engine Oil
For Passenger Cars Equipped With
Gasoline, Diesel and LPG Engines

PRODUCT USE

· Passenger cars with gasoline and diesel engine
· Vehicles with DOHC, Turbocharger, CRDI, Catalytic Converters
· Diesel vehicles equipped with after-treatment devices including EGR, DPF

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus and Sulfur) engine oil provides long life for exhaust after treatment devices including diesel particulate filter
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN GOLD #9 C5's excellent clean up properties help to remove dirt and sludge from building up
· Improved fuel efficiency by minimization of friction
· Provide Low speed pre-ignition and wear protection.

PERFORMANCE LEVEL

ACEA C5/C6, API SP

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-20	43.1	8.1	162	-40	236

S-OIL 7 GOLD #9 A5/B5



Fully Synthetic, Fuel Economic Engine Oil
For Passenger Cars Equipped
With Gasoline, Diesel and LPG Engines

PRODUCT USE

· Passenger cars with gasoline and diesel engnie where ACEA A5/B5, A1/B1, API SN technical level is required
· Suited to passenger cars with DOHC, Turbocharger, Direct injection system, Catalytic converters

PRODUCT PERFORMANCE

· Improved fuel efficiency by minimization of friction
· Rapid oil flow in cold condition assures easy start, good drivability and reduction of fuel consumption during start of your engine
· High viscosity index ensures adequate oil film strength at hot operating condition
· Excellent oxidation and thermal stability provides reduced sludge formation and ensures long oil life
· Excellent protection performance with optimized additive technology

PERFORMANCE LEVEL

ACEA A5/B5, A1/B1, API SL/CF, Ford 913C/D, RN0700

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)
	40°C	100°C		
5W-30	58.2	10	159	L-40

S-OIL 7 GOLD #9 A3/B4



Fully Synthetic Engine Oil
For Passenger Cars,
RV, Light Truck, SUV

PRODUCT USE

· Passenger cars, RV, light truck, SUV with gasoline and diesel engine
· Particularly passenger cars driving in modern start-stop traffic conditions

PRODUCT PERFORMANCE

· Full Synthetic base oil helps maintain oils initial conditions thanks to good stability and high viscosity index
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· Excellent detergent system removes dirt and deposits in engine and assures long oil and engine life

PERFORMANCE LEVEL

ACEA A3/B4, API SL (5W-30), API SN (0W-40, 5W-40, 10W-40), VW 502.00/505.00

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-40	76.3	13.3	178	-43	226
5W-30	71.2	12.0	166	-38	240
5W-40	91.7	15.1	174	-39	232
10W-40	86.4	13.1	151	-32	250

S-OIL 7 GOLD #9 ECO C3



Fully Synthetic Engine Oil
For Passenger Cars, RV, Light Truck, SUV

PRODUCT USE

· Passenger cars, RV, light truck, SUV with gasoline and diesel engine
· Particularly vehicles driving in modern start-stop traffic conditions
· Vehicles with DOHC, Turbocharger, CRDI, Catalytic converters
· Diesel Vehicles equipped with after-treatment devices including EGR, DPF(Diesel Particulate Filter)

PRODUCT PERFORMANCE

· This medium SAPS(Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for after treatment devices including DPF.
· Rapid oil flow in cold condition assures easy start and good drivability
· High viscosity index ensures adequate oil film strength at hot operating condition
· Excellent detergent system removes dirt and deposits in engine and assures long oil and engine life

PERFORMANCE LEVEL

ACEA C3, API SP

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	72.9	11.8	158	-38	234

S-OIL 7 RED #9 SQ



Fully Synthetic For Gasoline Engine

PRODUCT USE

· All passenger cars that run on gasoline under the latest global emission regulations
· Suitable for Various types of Hybrid car
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SQ, ILSAC GF-7 engine oil

PRODUCT PERFORMANCE

· This engine oil provides fuel efficiency improvements and a reduction in CO2 emissions
· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED#9 SQ is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SQ, ILSAC GF-7A (10W-30)
API SQ (5W-40, 10W-40)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-40	83.4	13.7	168	-38	238
10W-30	63	10.0	145	-35	270
10W-40	90.2	13.8	156	-35	260

S-OIL 7 RED #9 SP



Fully Synthetic For Gasoline Engine

PRODUCT USE

· All passenger cars that run on gasoline
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SP, ILSAC GF-6 engine oil
· Low viscosity (0W-16, 0W-20) lubricants are suitable for hybrid car

PRODUCT PERFORMANCE

· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #9 SP is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SP / ILSAC GF-6B (0W-16)
API SP / ILSAC GF-6A (0W-20, 0W-30, 5W-20, 5W-30, 10W-30),
API SP (5W-40, 10W-40)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-16	38.7	7.5	165	-45	230
0W-20	44.4	8.5	170	-45	234
0W-30	56.8	10.3	173	-44	232
5W-20	48.3	8.4	152	-40	264
5W-30	59.9	10.2	159	-40	244
5W-40	83.4	13.7	168	-38	238
10W-30	63.0	10.0	145	-35	270
10W-40	90.2	13.8	156	-35	260

S-OIL 7 RED #9 SN PLUS



Fully Synthetic Gasoline Engine Oil

PRODUCT USE

· All passenger cars that run on gasoline
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SN PLUS, ILSAC GF-5 engine oil

PRODUCT PERFORMANCE

· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #9 SN PLUS is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SN PLUS/CF, ILSA GF-5 (0W-20, 5W-30, 10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-16	38.7	7.5	165	-45	230
0W-20	44.4	8.4	170	-45	234
5W-30	59.9	10.2	159	-40	244
10W-30	63.0	10.0	145	-35	270

S-OIL 7 RED #9 SN



Fully Synthetic Engine Oil
For Passenger Cars That Run On Gasoline

PRODUCT USE

· All passenger cars that run on gasoline
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SN, ILSAC GF-5 engine oil

PRODUCT PERFORMANCE

· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #9 SN is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with improved fule efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SN/CF, ILSAC GF-5(0W-20/30, 5W-20/30, 10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
0W-20	44.4	8.5	170	-45	234
0W-30	56.8	10.3	173	-44	232
5W-20	48.3	8.4	152	-40	264
5W-30	59.9	10.2	159	-40	244
5W-40	83.4	13.7	168	-38	238
5W-50	115.5	18.3	177	-38	236
10W-30	63.0	10.0	145	-35	270
10W-40	90.2	13.8	156	-35	260

S-OIL 7 RED #9 LPG



Fully Synthetic
LPG & Gasoline Engine Oil

PRODUCT USE

· All passenger cars that run on LPG and gasoline
· Especially suitable for vehicles driving in modern start-stop traffic conditions
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SQ, ILSAC GF-7 engine oil

PRODUCT PERFORMANCE

· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #9 LPG is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with Improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SQ/ILSAC GF-7A / API SN (10W-40)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	63.0	10.0	145	-35	270
10W-40	90.4	13.6	152	-33	246

S-OIL 7 RED #7 SQ



Synthetic For Gasoline Engine

PRODUCT USE

· All passenger cars that run on gasoline
· All passenger cars that run on gasoline under the latest global emission regulations
· Suitable for Various types of Hybrid car
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SQ, ILSAC GF-7 engine oil

PRODUCT PERFORMANCE

· This engine oil provides fuel efficiency improvements and a reduction in CO2 emissions
· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #7 SQ is formulated with latest cleaning agents that help to remove dirt and deposits
· Eco-friendly engine oil with improved fuel efficiency caused by minimization of friction in moving parts

PERFORMANCE LEVEL

API SQ, ILSAC GF-7A

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-20	51.4	8.6	146	-42	224
5W-30	62.7	10.4	154	-43	226
10W-30	69.2	10.2	132	-41	226

S-OIL 7 RED #7 SP



Synthetic For Gasoline Engine

PRODUCT USE

· All passenger cars that run on gasoline
· Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SP, ILSAC GF-6 engine oil

PRODUCT PERFORMANCE

· This engine oil provides premium performance thanks to very stable and clean base oil properties
· High viscosity index ensures adequate oil film strength at hot operating condition
· S-OIL SEVEN RED #7 SP is formulated with latest cleaning agents that help to remove dirt and deposits actively
· Eco-friendly engine oil with improved

PERFORMANCE LEVEL

API SP / ILSAC GF-6A

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-20	50.6	8.5	146	-39	220
5W-30	61.9	10.2	151	-39	234
10W-30	67.9	10.2	136	-40	232

S-OIL 7 RED #7 SN



Synthetic Gasoline and
LPG/CNG/LNG Engine Oil

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi-valve,turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particular in severe conditions
· For all driving styles, vigorous speeds in all seasons
· Suitable to use in LPG/CNG/LNG engine (10W-30, 10W-40, 15W-40, 20W-50)

PRODUCT PERFORMANCE

· Meets API SN and ILSAC GF-5 requirements, the guarantee of high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Protects mechanical parts and fully preserves the engine power, thus contributing to its youth and strength
· Low viscosity grades provide reduced friction and therefore creaters fuel savings, which decrease CO2 emissions

PERFORMANCE LEVEL

API SN/CF, API SN/RC (5W-20/30, 10W-30), ILSAC GF-5 (5W-20/30, 10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-20	51.4	8.6	146	-42	224
5W-30	62.7	10.4	154	-43	226
10W-30	69.2	10.2	132	-41	226
10W-40	97.0	14.0	147	-39	226
15W-40	99.7	13.4	133	-34	234
20W-50	155.1	17.9	128	-27	254

S-OIL 7 RED #7 SL



Synthetic Oil For Gasoline Engine

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi valve, turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particularly in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Meets API SL and ILSAC GF-3 requirements, guarantee of an high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Protects mechanical parts and fully preserves the engine power, thus contributing to its youth and strength

PERFORMANCE LEVEL

API SL/CF, ILSAC GF-3

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	61.9	10.2	151	-39	234

S-OIL 7 RED #7 SJ



Synthetic Oil
For Gasoline Engine

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi valve, turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particular in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Meets API SJ and ILSAC GF-2 requirements, guarantee of an high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Gives the engine an excellent wear protection, develops performance and power
· Keeps the engine's most sensitive parts clean thanks to its advanced detergent and dispersive additives

PERFORMANCE LEVEL

API SJ, ILSAC GF-2

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	61.9	10.2	151	-39	234

S-OIL 7 RED #5 SM



High-Performance
Gasoline Engine Oil

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi-vavle, turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particularly in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Meets API SM requirements, guarantee of an high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Protects mechanical parts and fully preserves the engine power, thus contributing to its youth and strength

PERFORMANCE LEVEL

API SM/CF

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	94.7	13.8	147	-33	222

S-OIL 7 RED #5 SL



High-Performance
Gasoline Engine Oil

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi-vavle,turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particularly in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Meets API SL requirements, guarantee of an high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Protects mechanical parts and fully preserves the engine power, thus contributing to its youth and strength

PERFORMANCE LEVEL

API SL/CF

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	94.7	13.8	147	-33	222
20W-50	157.5	18.0	127	-27	246

S-OIL 7 RED #5 SJ



High-Performance
Gasoline Engine Oil

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi-vavle, turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particularly in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Meets API SJ and ILSAC GF-2 (5W-30 and 10W-30) requirements, guarantee of an high and constant quality for lubricants
· Ensures easy cold start due to its extreme fluidity at low temperature and maintains a very resistant oil film even at extremely high operating temperature
· Gives the engine an excellent wear protection, develops performance and power
· Keeps the engine's most sensitive parts clean thanks to its advanced detergent and dispersive additives

PERFORMANCE LEVEL

API SJ, ILSAC GF-2 (5W-30, 10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	61.9	10.2	151	-39	234
10W-30	72.6	10.9	139	-34	228
10W-40	94.7	13.8	147	-33	222

S-OIL 7 RED #5 SG



High-Performance
Gasoline Engine Oil

PRODUCT USE

· All gasoline engines, especially for most recent technology engines (multi-valve, turbocharged, with/without catalytic converter) supercharged or not, in cars
· Suitable for all journeys (in town, on highways) and particularly in severe conditions
· For all driving styles, vigorous speeds in all seasons

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Exceptional detergency level and soot dispersion properties
· High performance level insures safer and longer drains intervals

PERFORMANCE LEVEL

API SG

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	103.0	13.6	131	-30	232



MAXIMUM UPTIME, MINIMUM DOWNTIME

DYNAMIC DRIVING WITH TOP CLASS LUBRICANTS FROM KOREA!

S-OIL 7 BLACK #9 LS



Fully Synthetic Engine Oil
For All Top-Tier Heavy-Duty Engines

PRODUCT USE

- All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
- Suitable for most of OEMs including Benz, Volvo, Cummins for EURO IV, V and VI engines
- Light Trucks, RVs, SUVs, Heavy Trucks, Buses with diesel/CNG/LNG engines

PRODUCT PERFORMANCE

- Full Synthetic base oil enhances the engine protection and engine oil life thanks to good stability and high viscosity index
- This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for exhaust after treatment devices including diesel particulate filter
- Exceptional anti-wear performance allows all parts of engine keep initial condition and helps the operator's maintenance cost saving
- Excellent detergent system helps keep pistons and other engine parts clean for long engine life
- Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions

PERFORMANCE LEVEL

<5W-30> ACEA E6/E8/E9/E11, API CK-4, JASO DH-2, MB 228.51, Volvo VDS-4.5, Renault RLD-4, Detroit Diesel DDC93K222, Cummins CES 20086, Mack EO-S-4.5, MAN M3677, Scania LDF-4
<10W-40> ACEA E4/E6/E7/E8/E9/E11, API CK-4, CJ-4, JASO DH-2, DH-1, DL-O, MB 228.51/52/61, MB 228.51/52/61. Volvo VDS-4.5. Mack EO-S 4.5. Renault RLD-4. Cummins CES 20087 & CES 20086. Detroit DFS 93K223 & Detroit DFS 93K222. MTU Oil Category 3.1 & MTU Oil Category 2.1. Caterpillar ECF-3. Voith Class B.

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	73.2	12.2	164	-36	230
10W-40	100.2	15.1	158	-36	242

S-OIL 7 BLUE #9 CK-4



Fully Synthetic Engine Oil
For All Heavy-Duty Engines

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· Suitable for most OEMs including Benz, Volvo, Cummins for Euro IV, V, VI engines
· Light trucks, RVs, SUVs, Heavy trucks, Buses with diesel engines

PRODUCT PERFORMANCE

· Full synthetic base oil enhances the engine protection and engine oil life thanks to high stability and cleanliness
· This low SAPS (Sulfated Ash, Phosphorus and Sulfur) engine oil provides long life for exhaust after-treatment devices including diesel particulate filter
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions
· In cold condition, good fluidity provides easy start and prevents wear damage in initial stage

PERFORMANCE LEVEL

API CK-4/CJ-4, Volvo VDS-4.5, Cummins CES 20086, ACEA E9-16, Mack EO-S-4.5,
Caterpillar ECF-3, MB 228.31, Renault RLD-4, Deutz DQC III-10 LA, Category 2.1
Detroit Diesel 93K222, Ford WSS-M2C171-F1

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	78.1	12	148	-34	244
10W-40	99.0	14.8	155	-37	248
15W-40	103.4	15.1	153	-34	247

S-OIL 7 BLUE #7 CK-4



Synthetic Heavy-Duty Diesel Engine Oil
For The Newest API Standards

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· Suitable for most OEMs including Benz, Volvo, Cummins for Euro IV, V, VI engines
· Light trucks, RVs, SUVs, Heavy trucks, Buses with diesel engines

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long lifefor exhaust after treatment devices including diesel particulate filter
· Exceptional anti-wear performance provides all parts of engine keep initialcondition and helps the operator's maintenance cost saving
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions

PERFORMANCE LEVEL

API CK-4/CJ-4, Volvo VDS-4.5, Cummins CES 20086, ACEA E9-16, Mack EO-S-4.5,
Caterpillar ECF-3, MB 228.31, Renault RLD-4, Deutz DQC III-10 LA, Category 2.1,
Detroit Diesel 93K222, Ford WSS-M2C171-F1

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	79.8	11.8	142	L-40	234

S-OIL 7 BLUE #5 CK-4



Premium Heavy-Duty Diesel Engine Oil
For The Newest API Standards

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· Suitable for most OEMs including Benz, Volvo, Cummins for Euro IV, V, VI engines
· Light trucks, RVs, SUVs, Heavy Trucks, Buses with diesel engines

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for exhaust after treatment devices including diesel particulate filter
· Exceptional anti-wear performance provides all parts of engine keep initial condition and helps the operator's maintenance cost saving
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions

PERFORMANCE LEVEL

API CK-4/CJ-4, Volvo VDS-4.5, Cummins CES 20086, ACEA E9-16, Mack EO-S-4.5,
Caterpillar ECF-3, MB 228.31, Renault RLD-4, Deutz DQC III-10 LA, Category 2.1,
Detroit DFS93K222, Ford WSS-M2C171-F1

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	112.4	14.5	132	L-40	236

S-OIL 7 BLUE #9 CJ-4/SL



Fully Synthetic Engine Oil
For All Heavy-Duty Engines

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· Light Trucks, RVs, SUVs, Heavy Trucks, Buses with diesel engines
· Especially diesel vehicles with European engine under high pressure and temperature
· Particularly suited for EURO VI, V and IV and older generation engines fitted with after-treatment devices including DPF, EGR and SCR

PRODUCT PERFORMANCE

· Full Synthetic base oil enhances the engine protection and engine oil life thanks to high stability and cleanliness
· This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for exhaust after treatment devices including diesel particulate filter
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions
· In cold condition, good fluidity provides easy start and prevents wear damage in initial stage

PERFORMANCE LEVEL

API CJ-4/CJ-4 PLUS, Cummins CES 20086, DFS93K222, MACK EO-S-4.5, Volvo VDS-4.5,
CAT ECF-3, FORD WSS-M2C171-F1, ACEA E9, MB 228.31, Renault Truck RLD-4, MTU Type 2.1,
Deutz DQC III-10 LA, JASO DH-2

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	95	14.3	154	-35	228
15W-40	101.7	15	154	-32	240

S-OIL 7 BLUE #7 CJ-4/SL



Synthetic Heavy-Duty Diesel Engine Oil
Fitted With After Treatement
Devices DPF, EGR and SCR

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· Light Trucks, RVs, SUVs, Heavy Trucks, Buses with diesel engines
· Especially diesel vehicles with European engine under high pressure and temperature
· Particularly suited for EURO IV, V, VI to older generation engines fitted with after treatment devices including DPF, EGR and SCR

PRODUCT PERFORMANCE

· This low SAPS (Sulfated Ash, Phosphorus, Sulfur) engine oil provides long life for exhuast after treatment devices including diesel particulate filter.
· Synthetic technology enhances the engine protection and engine oil life thanks to high stability and cleanliness
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions
· In cold condition, good fluidity provides easy start and prevents wear damage in initial stage

PERFORMANCE LEVEL

API CJ-4/CJ-4 PLUS, Cummins CES 20086, DFS93K222, MACK EO-S-4.5, Volvo VDS-4.5, CAT ECF-3, FORD WSS-M2C171-F1, ACEA E9, MB 228.31, Renault Truck RLD-4, MTU Type 2.1, Deutz DQC III-10 LA, JASO DH-2

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	104.4	15.4	156	L-40	224
15W-40	108.2	14.8	142	L-40	232

S-OIL 7 BLUE #9 CI-4/SL



Fully Synthetic Engine Oil
For All Heavy-Duty Engines

PRODUCT USE

· All turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions
· RVs, SUVs, Light Truck, Heavy Truck and Buses fitted with diesel engine
· Particularly suited for low emission engines fitted with after-treatment devices including EGR and SCR

PRODUCT PERFORMANCE

· Full synthetic base oil enhances the engine protection and engine oil life thanks to high stability and cleanliness
· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions
· In cold condition, good fluidity provides easy start and prevents wear damage in initial stage

PERFORMANCE LEVEL

<10W-40>
ACEA E7-16, Volvo VDS-3, CES 20076/77/78, API CI-4, SL, MACK EO-M Plus, DQC III-18, MB 228.3, 229.1, Renault Truck RLD-2, 93K215, JASO DH-1-17, MAN M3275, MTU 2
<15W-40>
API CI-4, MB 228.3

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	98.7	14.4	150	-33	260
15W-40	101.1	14.8	153	-37	238

S-OIL 7 BLUE #7 CI-4/SL



Synthetic Heavy-Duty Diesel Engine Oil
Fitted With After Treatement
Devices EGR and SCR

PRODUCT USE

· Suitable to all turbocharged or normally aspirated Diesel engines of civil works machines, trucks, fishing boats, locomotives, buses.
· Light Trucks, RVs, SUVs, Heavy Trucks, Buses with diesel engines
· Particularly suited for latest engines fitted with after treatment devices including EGR and SCR.

PRODUCT PERFORMANCE

· Excellent detergent system helps keep pistons and other engine parts clean for long engine life.
· Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions.
· In cold conditions, good fluidity provides easy start and prevents wear damage in initial stage.
· Excellent oxidation resistance, anti-wear and anti-corrosion properties protect your engine during operation.

PERFORMANCE LEVEL

<10W-30/40> ACEA E7-16, Volvo VDS-3, CES 20076/77/78, API CI-4, SL, MACK EO-M Plus, DQC III-18, MB 228.3, 229.1, Renault Truck RLD-2, 93K215(10W-40 only), JASO DH-1-17, MAN M3275, MTU 2
<15W-40> API CI-4, MB 228.3

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	80.6	11.7	139	-36	238
10W-40	100.3	14.6	151	-36	238
15W-40	107.2	14.5	139	-29	238
20W-50	158.6	19.1	137	-38	246

S-OIL 7 BLUE #5 CI-4/SL



High-Quality Heavy-Duty Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats, locomotives and buses
· Light Trucks, RVs, SUVs, Heavy Trucks and Buses with diesel engines
· Particularly suited for latest engines fitted with after-treatment devices including EGR and SCR

PRODUCT PERFORMANCE

· Excellent detergent system helps keep pistons and other engine parts clean for long engine life
· Good thermal breakdown resistance ensures engine protection under modern severe engine conditions
· In cold condition, good fluidity provides easy start and prevents wear damage in initial stage
· Excellent oxidation resistance, anti-wear and anti-corrosion properties protect your engine during operation

PERFORMANCE LEVEL

API CI-4, MB 228.3

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	114.8	15.4	140	-38	238
20W-50	182.4	21.0	136	-30	243

S-OIL 7 BLUE #7 CH-4/SJ



Synthetic Heavy-Duty Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats and locomotives
· Suitable for diesel stationary engines for energy production

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Excellent resistance of the oil film at high temperatures and resistance to oxidation
· Very high level of detergency and dispersion properties
· Very good anti-wear, anti-corrosion, anti-rust and anti-foaming properties

PERFORMANCE LEVEL

API CH-4/SJ

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	82.9	12.5	147	-38	222

S-OIL 7 BLUE #5 CH-4/SJ



High-Quality Heavy-Duty Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats, locomotives
· Suitable for diesel stationary engines for energy production

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Excellent resistance of the oil film at high temperatures and resistance to oxidation
· Very high level of detergency and dispersion properties
· Very good anti-wear, anti-corrosion, anti-rust and anti-foaming properties

PERFORMANCE LEVEL

API CH-4/SJ

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	117.7	15.8	142	-40	226
20W-40	131.3	15	116	-35	244
20W-50	178.8	20.3	133	-33	232

S-OIL 7 BLUE #7 CF-4/SG



Synthetic Heavy-Duty Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats and locomotives
· Responds to the API CF-4 specifications for new low emission engines using low Sulfur fuels

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Exceptional detergency level and soot dispersion properties
· High performance level insures safer and longer drains intervals

PERFORMANCE LEVEL

API CF-4/SG

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
5W-30	65.4	10.9	158	-43	228

S-OIL 7 BLUE #5 CF-4/SG



High-Quality Heavy-Duty Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats, locomotives
· Responds to the API CF-4 specifications for new low emission engines using low Sulfur fuels

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Exceptional detergency level and soot dispersion properties
· High performance level insures safer and longer drains intervals

PERFORMANCE LEVEL

API CF-4/SG

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
50	231.6	20.3	103	-16	262
70	323.3	25.5	102	-13	278
10W-30	70.7	10.9	144	-40	228
15W-40	121.5	16.0	139	-34	234
15W-40 (TBN↑)	123.3	16.1	140	-39	234
20W-50	171.7	19.3	128	-32	250
20W-50 (TBN↑)	175.3	19.3	126	-32	254
25W-60	260.9	23.6	113	-26	256

S-OIL 7 BLUE #5 CF



Monograde Heavy Duty-Diesel Engine Oil

PRODUCT USE

· Suitable to all turbocharged or normally aspirated diesel engines of civil works machines, trucks, fishing boats, locomotives
· Responds to the API CF specifications for new low emission engines using low Sulfur fuels

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Exceptional detergency level and soot dispersion properties
· High performance level insures safer and longer drains intervals

PERFORMANCE LEVEL

API CF

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
40	142.4	14.8	103	-24	280
50	228.6	20.1	102	-15	282
70	335.5	25.7	100	-12	288

S-OIL 7 BLUE #5 CD



Multigrade Heavy-Duty Diesel Engine Oil

PRODUCT USE

· All turbocharged or normally aspirated diesel engines for all services when the manufacturer has no special requirement

PRODUCT PERFORMANCE

· Very high viscosity index and good viscosity stability in operation
· Excellent resistance of the oil film at high temperatures and resistance to oxidation
· Very high level of detergency and dispersion properties
· Very good anti-wear, anti-corrosion, anti-rust and anti-foaming properties

PERFORMANCE LEVEL

API CD

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W	42.2	6.7	114	-36	236
30	96.0	11.5	107	-30	260
40	138.8	14.5	103	-24	272
20W-50	164.6	18.6	127	-27	262

S-OIL 7 BLUE #9 CNG BEST LL



Top Tier Fully Synthetic Heavy-Duty CNG Engine Oil

PRODUCT USE

· All Buses, Trucks with CNG Engines
· Suitable to use in LPG/LNG Engines

PRODUCT PERFORMANCE

· Enhanced anti-oxidation and anti-nitration performance for severe operating condition compared with gasoline or diesel engine
· Excellent low temperature fluidity and anti-wear performance to protect system even in cold weather
· Optimized additives technology to reduce the formation of sludge or deposit
· Extended drain interval thanks to severely hydrotreated synthetic base oil made by S-OIL
· Enhanced anti-wear performance for dry operating condition to prevent valve recession and guttering or burning
· Compatible after-treatment system
· Excellent anti-corrosion and anti-foam tendency

PERFORMANCE LEVEL

API CF, Cummins CES 20074, Detroit Diesel Series 50/60

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	100.8	15	156	-40	248

S-OIL 7 BLUE #5 CNG BEST



Multigrade Oil For Natural Gas Engine

PRODUCT USE

· All Buses, Trucks with CNG Engines
· Suitable to use in LPG/LNG Engines
· High output, highly turbocharged 4-stroke stationary natural gas engines

PRODUCT PERFORMANCE

· Formulated with optimized ash contents to prevent wear damage or troubles of valve system
· Excellent anti oxidation and nitration performance at very high operation temperature of CNG engine
· High chemical stabilty and long drain interval helps the engine stay in good condition during whole period
· Good fluidity at low temperature, so it secure the excellent cold startability and fewer oil consumption

PERFORMANCE LEVEL

Cummins CES 20074, Detroit Diesel Series 50 & 60

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	111.2	14.4	132	-35	236



S-OIL 7
ATF MULTI



Fully Synthetic MULTI-Purpose 4/5/6/7/8 Speed
Automatic Transmission Fluid

PRODUCT USE

· Wide range of 4/5/6/7/8 speed automatic gearboxes in Asian, European, American passenger vehicles
· Follow the vehicle's ATF fluid change interval and performance level recommended in your owner's manual

PRODUCT PERFORMANCE

· Full Synthetic base oil helps maintian oils initial conditions thanks to good stability and high viscosity index
· Exceptional friction and anti-shudder performances with advanced technology
· Excellent viscosity stability in operation
· Good thermal stability, resistance to oxidation and wear protection

PERFORMANCE LEVEL

GM Dexron II/IID/IIE/IIIG/IIIH/VI, FORD Mercon, MB 236.5/6/7/8/9/91/10/11,
HYUNDAI KIA SP-II/SP-III, NISSAN Matic D/J/K, JASO M315 1A, TOYOTA D-II/T/T-III/T-IV/WS,
ZF TE-ML 11A/B

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
ATF Multi	32.3	7.3	200	-48	242

S-OIL 7 ATF VI



Fully Synthetic 6/7/8 Speed
Automatic Transmission Fluid

PRODUCT USE

· The latest generation of high efficiency 6/7/8 speed automatic transmission

PRODUCT PERFORMANCE

· Excellent viscosity stability in operation
· Exceptional friction and anti-shudder performances
· Enhanced fuel economies thanks to low viscosity and excellent low temperature performance
· Good thermal stability and resistance to oxidation

PERFORMANCE LEVEL

GM Dexron VI, FORD Mercon LV/ULV, Mazda FA/FZ, MB 236.12/14/15/41,
HYUNDAI KIA SP-IV/SP-H IV/SP-IV RR, Mitsubishi ATF J-3, NISSAN Matic W/S,
TOYOTA T-WS, JASO M315 1A, Honda DW-1, ZF Lifeguardfluid 6/8/9

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
ATF VI	30.2	6.0	153	-50	215

S-OIL 7 ATF DEXRON VI



Synthetic Automatic Transmission Fluid
Officially Approved By GM

PRODUCT USE

· S-OIL SEVEN ATF DEXRON®-VI is recommended for all 2006 and beyond GM's vehicles with automatic transmissions.
· S-OIL SEVEN ATF DEXRON®-VI is also fully back-serviceable and can be used wherever DEXRON-II and/or DEXRON III are recommended.

PRODUCT PERFORMANCE

· Extended drain intervals, Consistent shift performance
· Protect against wear, corrosion, and the formation of harmful deposits such as lacquers and sludge
· Excellent thermal stability and resistance to oxidation
· Excellent viscosity stability in operation
· Exceptional friction and anti-shudder performances
· Enhanced fuel economies thanks to low viscosity and excellent low temperature performance

PERFORMANCE LEVEL

GM DEXRON®-VI/II/III, HYUNDAI KIA SP-IV, FORD MERCON®, FORD M2C 138CJ, 166H,
Mazda ATF FZ, F-1, S-1m Mitsubishi Diaqueen J2,3,ATF PA, MB 236.6,7,9, NISSAN Matic K, S,
JASO 1A-LV, TOYOTA ATF T-IV, WS, Honda DW-1, ZF TE-ML 09, 09X, 11A 11B

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
ATF DEXRON-VI	29.5	6.0	15.9	-45	222

S-OIL 7 ATF III



Synthetic Automatic Transmission Fluid Requiring
GM DEXRON III and ALLISON C-4

PRODUCT USE

· Suitable for use all transmissions of passenger cars, trucks, buses and public works machineries when a fluid type ALLISON C-4 is required
· Hydraulic systems when a fluid type GM DEXRON III is required

PRODUCT PERFORMANCE

· Very high viscosity index linked with an excellent viscosity stability in operation
· Very low pour point
· Excellent resistance to oxidation

PERFORMANCE LEVEL

GM TASA, DEXRON II (D/E), DEXRON III (G/H), Mazda ATF F-1, CAT TO-2,
Ford MERCON, ALLISON C-3/C-4/TES 389, Volvo CE97340, Vickers M2950-S, I-268-S

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
ATF III	35.1	7.48	228	-49	188

S-OIL 7 DCTF



Synthetic Multi-Purpose Dual Clutch
Transmission Fluid

PRODUCT USE

· S-OIL SEVEN DCTF is suitable for use in dual clutch transmissions equipped with synchronization, gear set and hydraulic control.
· It is not recommneded for dry clutch DCT type.

PRODUCT PERFORMANCE

· Excellent synchronizer and clutch performance due to balanced frictional characteristics.
· Exceptional wear resistance and resistance to oxidation
· Outstanding viscosity and temperature properties

PERFORMANCE LEVEL

Hyundai KIA wet DCT, VW/Audi/Skoda/SEAT (TL 052 182/052 529), MB (236.21),
Volvo (1161838/39), BMW (83 22 2 148 579/83 22 2 147 477/83 22 0 440 214/83 22 2 148 579),
Ford/GETRAG (WSS-M2C936A), Mitsubishi (MZ 320065/DIAGUEEN SSTF-I),
Porsche (999.917.080.00), Peugeot/Citroen (9734.S2)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
DCTF	34.1	6.9	166	-49	229

S-OIL 7 CVTF



Synthetic High Performance Transmisison Oil
For Belt-CVT and Chain-CVT

PRODUCT USE

· S-OIL SEVEN CVTF is designed for use in a wide range of CVT
· Although miscible and compatible with conventional branded gear oil, mixing with other gear oils should be avoided

PRODUCT PERFORMANCE

· Very stable friction coefficients
· Good shear stability
· Excellent anti-foam and anti-shudder durability

PERFORMANCE LEVEL

Recommended for use where the following specifications are called for :
Audi/VW (TL52180/TL52516), BMW (EZL 779A), Daihatsu (CVTF-DC/DFE), FCA (CVTF+4),
Ford (WSS-M2C933-A/MERCON C/M2C928-A), GM (DEX-CVT, GM CVT), Honda (HCF-2),
Hyundai/Kia (SP CVT-1), Mazda (CVTF 3320), MB (MB 236.30), Mitsubishi (CVTF J1/J4),
Nissan (NS-1/NS-2/NS-3), Subaru (e-CVTF/CV-30/CVTF-II/CVTF/i-CVT F/i-CVT FG),
Suzuki (CVT Green1/Green2/CVTF 3320), Toyota (Toyota TC/FE/WS)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
CVTF	36.9	7.4	173	-49	218

S-OIL 7 GEAR EP



Gear Oil For API GL-4

PRODUCT USE

· Gear boxes, axles, transfer boxes for truck, buses, construction equipment, tractor etc
· Vehicles with synchromesh

PRODUCT PERFORMANCE

· It is mixed with high performance additives including special extreme pressure additive to meet various performance requirements of gears
· High viscosity index
· Excellent anti-oxidant and anti-foam properties
· Excellent stability in service
· Good anti-wear property forms a film between gear contact surfaces under high/impact load to prevent damage of the gear face and reduce friction to enable smooth gear operation
· Suppresses formation of sludge under high temperature conditions thanks to superior thermal stability
· Exceptional anti-rust contributes to the long life of gears by preventing corrosion

PERFORMANCE LEVEL

API GL-4, US MIL-L-2105

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
90	190.9	17.5	99	-20	242

S-OIL 7 MTF FX



Fuel-Saving High Quality
Manual Transmission Oil

PRODUCT USE

· Front wheel drive gearboxes and transaxles of all passenger cars

PRODUCT PERFORMANCE

· Forms a stable lubricant film to prevent damage to the surface of parts
· Oxidation and thermal stability minimizes sludge, so it enhances the durability under various temperature
· Very high viscosity index ensures easy start-ability due to its excellent fluidity at low temperature and protects gears by forming very resistant oil film even at high operating temperature
· Good anti-wear and extreme pressure properties protect gears and synchromesh to ensure long life of critical parts
· Excellent anti-foaming, anti-rust and anti-corrosion
· This fluid has the advantage of smooth transition in gear shift

PERFORMANCE LEVEL

API GL-4

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
75W-85W	64.1	11.8	182	-42	222

S-OIL 7 GEAR HD



Synthetic Based Multigrade Gear Oil
Requiring API GL-5

PRODUCT USE

· Suitable to all highly loaded gears (hypoid type gear applications, axles, final drivers, transfer cases and gearboxes) when an API GL-5 level of performance is required

PRODUCT PERFORMANCE

· Synthetic blended (75W-90) & Mineral based (80W-90, 85W-90, 85W-140) multi-grade oil.
· High viscosity index providing a good lubrication and allowing easy gear changes at low as well as high temperatures.
· Benefits of a low viscosity at low temperature.
· Very high Extreme-pressure properties.
· Excellent wear reducing properties, high oxidation resistance and anti-rust properties.
· Contributes to protect mechanical parts and improve drivability and driving stability

PERFORMANCE LEVEL

API GL-5, ZF TE-ML 07A, US Military : MIL-L-2105D

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
75W-90	88.2	14.9	177	-35	216
80W-90	131.6	14.2	106	-35	226
85W-90	141.2	14.2	97	-26	230
85W-140	338.4	25.5	98	-25	238

S-OIL 7 GEAR LSD



High Performance Axle Oil
For Limited Slip Differentials

PRODUCT USE

· Manual transmission, transaxles and Differentials which require API GL-5 level performance lubricants
· Limited-slip hypoid differentials fitted in all kind of vehicles including cars, trucks and buses
· Especially suitable for Japanese OEMs' limited slip differential design

PRODUCT PERFORMANCE

· It is formulated with proven friction modifier suitable for conventional limited slip differentials, and will provide effective limited slip performance in severe operation condition
· Extreme pressure performance protect gears and bearings from scuffing and wear to ensure long life of critical parts
· Selected additive technologies and high quality base oil reduce maintenance cost by providing increased oxidation and thermal stability for minimized sludge and oxidation products
· Welled designed viscosity profile from hot to cold temperature provides reliable film thickness in hot operating condition and excellent fluidity in cold temperature for good start-up of vehicles

PERFORMANCE LEVEL

API GL-5, Conventional Japanese OEMs' LSD/ ZF TE-ML07A & TE-ML08

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
75W-90	79.8	14.4	189	-39	202
80W-90	135.5	14.3	104	-26	194

S-OIL 7 GEAR TO-4



High Performance Lubricants
For Off-highway Equipments and Hydraulic System

PRODUCT USE

· Heavy-duty off-highway equipment's power shift, final drive, wet brake and hydraulic system
· Heavy-duty diesel engine oil requiring API CF/CF-2
· Other applications where manufacturers recommends a fluid meeting Caterpillar TO-4/TO-4M, Allison C4 specification

PRODUCT PERFORMANCE

· Excellent low temperature fluidity provides smooth start up performance and hardware protection in cold condition
· Maximized oil life from very good oxidation stability, resistance of sludge, varnish and deposit formation
· Latest corrosion inhibitor reduces maintenance cost by providing reliable protection of critical part in heavy-duty equipment
· It doesn't contain viscosity index improver made from polymer, so it provides consistent film thickness
· Proven anti-wear performance provides extreme protection characteristics over Caterpillar TO-4 requirement
· It provides optimized friction properties, so operator can feel comfortable and reliable

PERFORMANCE LEVEL

Caterpillar TO-4/TO-4M, Komatsu KES 07.861.1, ZF TE-ML-03C/07F, API MT-1, Allison C4, API CF/CF-2

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W	38.4	6.2	109	-32	228
30	93.7	11.1	105	-26	260
40	144.5	14.4	98	-21	262
50	205.0	18.2	97	-18	268

S-OIL 7 4T RIDER #9 MA2



Fully Synthetic Engine Oil Designed
For High Performance 4-Stroke Motorcycle

PRODUCT USE

· All type of modern 4-stroke motorcycle engines of all cubic capacities, for most severe condition of use
· Adapted for gear boxes lubrication and oil immersed clutches
· Suitable for bikes where API SN (and below) and JASO MA or MA2 specification are recommended

PRODUCT PERFORMANCE

· Full Synthetic base oil helps maintain oils initial conditions thanks to good stability and high viscosity index
· Base oil's good quality provides long engine life and low costs for maintenance
(But manufactuers' recommended oil change intervals must be complied with)
· Excellent engine and major parts lubrication and protection in all severe condition including normaldaily urban or rural traffic (long trips, short commuting and stop and go conditions)
· High friction factor proved by official friction test gives good transmission performance by preventing clutch slippage

PERFORMANCE LEVEL

JASO MA2, API SN PLUS (10W-40, 10W-50), API SL (10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	77.1	11.9	150	-33	254
10W-40	98.2	14.6	154	-33	260
10W-50	124.2	17.7	158	-33	256

S-OIL 7 4T SCOOTER #9 MB



Fully Synthetic Engine Oil Designed
For High Performance 4-Stroke Motorcycle

PRODUCT USE

· Recommended for the modern 4-stroke motorcycle engines such as scooters and mopeds
· Not recommended for use in wet clutch application
· Adapted for gear boxes lubrication and oil dry clutches such as CVT technology
· Suitable for bikes where API SN (and below) and JASO MB specification are recommended

PRODUCT PERFORMANCE

· Full Synthetic base oil helps maintain oils initial conditions thanks to good stability and high viscosity index
· Base oil's good quality provides long engine life and low costs for maintenance (But manufactures' recommended oil change intervals must be complied with)
· Excellent engine and major parts lubrication and protection in all severe condition including normal daily urban or rural traffic (long trips, short commuting and stop and go conditions)
· Lower friction factor proved by official friction test gives good transmission performance and fuel economy improvement

PERFORMANCE LEVEL

JASO MB, API SN PLUS (10-40), API SL (10W-30)

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-30	77.0	11.9	150	-33	254
10W-40	97.3	14.4	152	-33	254
10W-50	120.7	17.7	162	-34	252

S-OIL 7 4T RIDER #7 MA2



Synthetic Multi-Purpose
4-Storke Gasoline Engine Oil

PRODUCT USE

- All type of modern 4-stroke motorcycle engines of all cubic capacities, for most severe condition of use
- Adapted for gear boxes lubrication and oil immersed clutches
- Suitable for bikes where API SN (and below) and JASO MA or MA2 specification are recommended

PRODUCT PERFORMANCE

- Synthetic base oil helps maintain oils initial conditions thanks to good stability and high viscosity index
- Base oil's good quality provides long engine life and low costs for maintenance(But manufacturers recommended oil change intervals must be complied with)
- Excellent engine and major parts lubrication and protection in all severe condition including normal daily urban or rural traffic (long trips and short commuting under stop-and-go conditions)
- High friction factor proved by official friction test gives good transmission performance by preventing clutch slippage

PERFORMANCE LEVEL

JASO MA2, API SN PLUS

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
10W-40	97.5	14.3	151	-36	236
15W-50	146.9	18.8	145	-25	266

S-OIL 7 4T RIDER #5 MA2



High Quality Multi-Purpose
4-Storke Gasoline Engine Oil

PRODUCT USE

- All type of modern 4-stroke motorcycle engines of all cubic capacities, for most severe condition of use
- Adapted for gear boxes lubrication and oil immersed clutches
- Suitable for bikes where API SN (and below) and JASO MA or MA2 specification are recommended

PRODUCT PERFORMANCE

- Very high viscosity index and good viscosity stability in operation
- Exceptional detergency level and soot dispersion properties
- Very high level of detergency and dispersion properties
- Very good anti-wear, anti-corrosion, anti-rust and anti-foaming properties

PERFORMANCE LEVEL

JASO MA2, API SN PLUS

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
15W-40	110.5	14.6	136	-30	232
20W-40	118.4	14.4	123	-30	248
20W-50	146.2	18.1	138	-30	238

S-OIL 7 2T RIDER #5 FC 20



Synthetic/High Quality Multi-Purpose
2-Storke Gasoline Engine Oil

PRODUCT USE

· All types of two stroke motorcycle engines of all cubic capacities(motorcycles, scooters and mopeds)
· Adapted for gear boxes lubrication and oil immersed clutches for premixing with gasoline at the ratio recommended by the engine capacities manufacturer

PRODUCT PERFORMANCE

· The strong and efficient detergent additives ensure that the distribution system remains clean and engine retains its initial efficiency
· Makes a permanent oil film, preventing any risk of seizure of binding
· Burns without leaving any sticky deposits
· The special solvents and polymers it contains help reduce exhaust smoke and emissions
· Avoids sparks plug fouling
· Very good anti-corrosion, anti-rust and anti-wear properties
· Pre-diluted to ensure a stable and homogeneous mixture

PERFORMANCE LEVEL

JASO FC, API TC

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
20	47.6	8.1	142	-35	114

S-OIL 7 CLEAN



Fully Synthetic Engine Flushing Oil
For Gasoline, Diesel and LPG/CNG/LNG Engine

PRODUCT USE

· It is designed for use in all engine types (gasoline, diesel and LPG) in passenger cars, SUVs, light and heavy duty commercial vehicles, motorcycles and so on

PRODUCT PERFORMANCE

· When exchanging the engine oil it removes the existing used oil and sludge
· Piston oil film is formed smoothly
· Improve ride comfort and noise reduction
· Reducing the exhaust to Improve the fuel efficiency

USE METHOD

· Drain the existing engine oil
· Idling for 10 minutes after injection S-OIL 7 CLEAN
· Drain S-OIL 7 CLEAN
· Replace the oil filter with a new one and fill the new engine oil

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
CLEAN	33.5	6.2	134	-17	248

S-OIL 7 OUTBOARD 2T TC-W3



Two-Stroke Premium Outboard Motor Oil

PRODUCT USE

· All two-stroke, water cooled, marine outboard gasoline engines where NMMA TC-W3® lubricants required
· Lawn mower, leaf blower, golf carts, chain saws and other two-stroke powered equipment
· Suitable for two-stroke engines manufactured by Mercury, Evinrude, Yamaha, Nissan and Suzuki where NMMA TC-W3® lubricants required

PRODUCT PERFORMANCE

· Advanced ashless detergent and dispersant system provides protection against piston ring sticking, spark plug fouling, So keeps piston, rings, plugs and exhaust port clean
· Easy mixing and stable mixtures with gasolines even at low ambient temperatures.
· Trouble free operating and reduces maintenance costs
· Excellent rust and corrosion protection in fresh or salt water
· Certified by NMMA for service TC-W3 at the manufacturer's recommended fuel / oil ratio

PERFORMANCE LEVEL

National Marine Manufacturers Association (NMMA) TC-W3® Certified RL-13880W

TYPICAL PROPERTIES

TEST ITEM	METHOD	UNIT	S-OIL Outboard 2T TC-W3
Specific Gravity	ASTM D1298	-	0.8651
Viscosity 40°C	ASTM D445	c5t	46.0
Viscosity 100°C	ASTM D445	c5t	8.0
Viscosity Index	ASTM D2270	-	129
Flash Point	ASTM D92	°C	106
Pour Point	ASTM D97	°C	-41

S-OIL 7 POWER STEERING FLUID



Power Steering Fluid
For Smooth Steering Wheel Operation
By Improving Low Temperature Fluidity

APPLICATIONS

· Power steering oil is an incompressible fluid used in hydraulic power steering systems.

FEATURES AND POTENTIAL BENEFITS

· Protects power steering system against wear.
· Protects rubber hoses.
· Resists foaming, oxidation, corrosion and rusting.
· Stops power steering squeaks.

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
POWER STEERING FLUID	30.2	5.3	104	-36	228

S-OIL 7 SUPER COOLANT LL



Long Life Coolant and Antifreeze To
Cool Gasoline, Diesel and LPG/LNG/CNG Engnies
WithThe Change Interval Of 5 Year Or 200,000km

APPLICATIONS

· Automotive cooling systems
· Production line of car manufacturers (KG Mobility)
· Industrial cooling systems and vessel refrigeration systems

FEATURES AND POTENTIAL BENEFITS

· Outstanding hot surface aluminum protection
· Superior protection in high operating temperatures
· Improve water pump life due to reduced water pump seal wear
· Excellent long-term corrosion protective for metal corrosion in the cooling System

PERFORMANCE LEVEL

SNS-N-761, GM 6277M, KS M 2142, GB 29743, ASTM D 3306, JIS K 2234

TYPICAL PROPERTIES

TEST ITEM	UNIT	S-OIL 7 SUPER COOLANT LL
Color	Color	Red
pH, 33 vol% in distilled water	pH	8.3
Specific Gravity, 20°C	-	1.131
Water Content	Mass %	4.3
Boiling Point	°C	168
Flash Point	°C	124

S-OIL 7 SUPER COOLANT



Coolant and Antifreeze To
Cool Gasoline, Diesel and LPG/LNG/CNG
Engines As Well As Preventing Them From Freezing

APPLICATIONS

· Automotive cooling systems
· Industrial cooling systems and vessel refrigeration systems

FEATURES AND POTENTIAL BENEFITS

· Outstanding hot surface aluminum protection
· Superior protection in high operating temperatures
· Improve water pump life due to reduced water pump seal wear
· Excellent long-term corrosion protective for metal corrosion in the cooling system

PERFORMANCE LEVEL

KS M 2142, GB 29743, ASTM D 3306, JIS K 2234

TYPICAL PROPERTIES

TEST ITEM	UNIT	S-OIL 7 SUPER COOLANT LL
Color	Color	Pink
pH, 33 vol% in distilled water	pH	8.4
Specific Gravity, 20°C	-	1.129
Water Content	Mass %	4.0
Boiling Point	°C	170
Flash Point	°C	124

S-OIL 7
BRAKE FLUID



Designed For Use Where Motor
VehicleBrake Fluid Is Recommended By
The Motor Vehicle Manufacturer

PRODUCT USE

· Automobile manufacturing line
· All models with hydraulic brake system

STORAGE

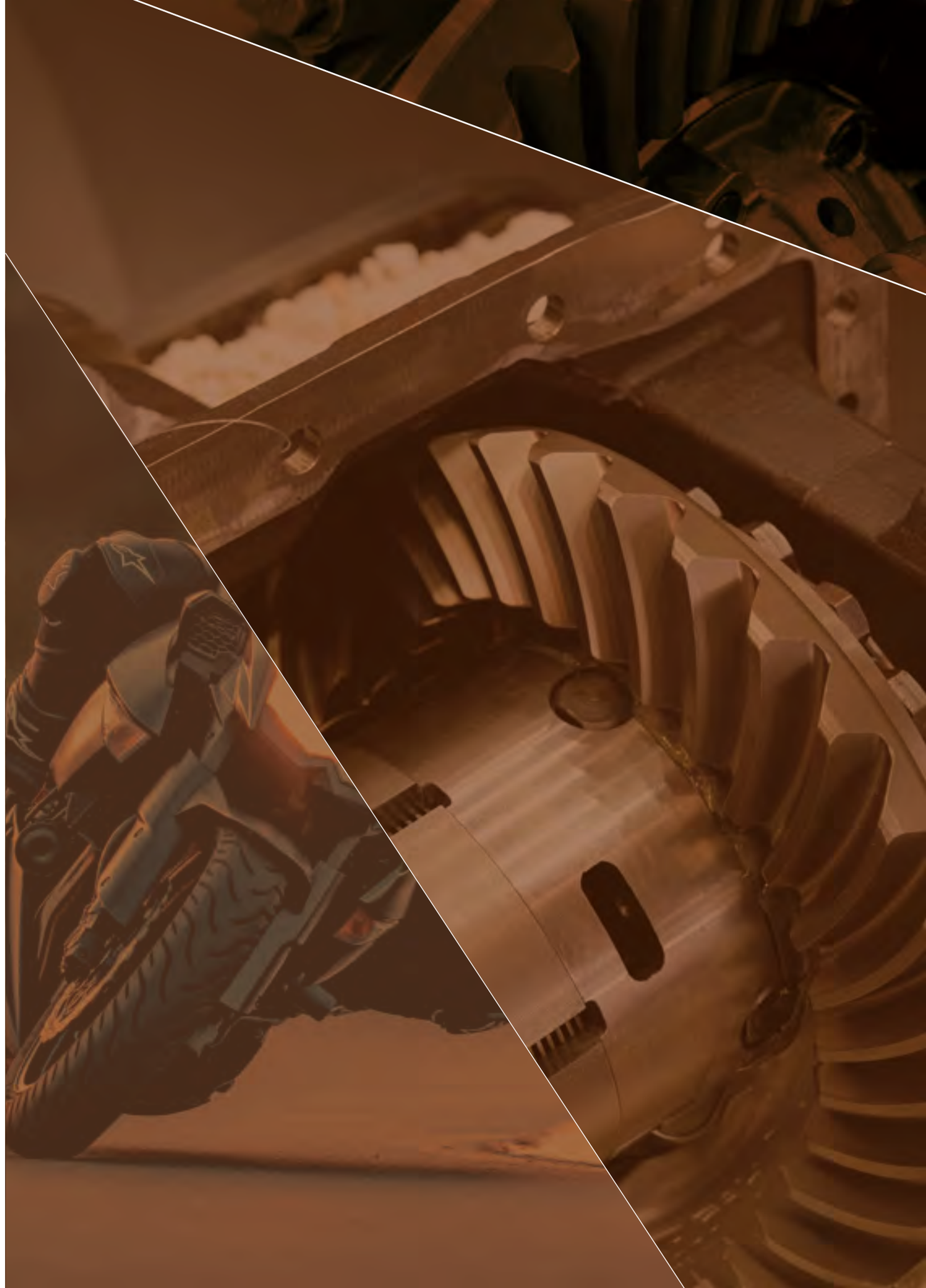
· High boiling point and wet boiling point (prevent Vapor lock)
· Superior metal corrosion protection
· Rubber compatibility (SBR, EPDM Rubber)
· Excellent low temperature stability

PERFORMANCE LEVEL

DOT-3 : KS M 2141 Type3, FMVSS 116 DOT-3, SAE J1703, ISO 4925 Class3, JIS K 2233 Type3 (BF-3)
DOT-4 : KS M 2141 Type4, FMVSS 116 DOT-4, SAE J1704 (Standard), ISO 4925 Class4, JIS K 2233 Type4

TYPICAL PROPERTIES

Product	Boiling Point		Viscosity		PH	Density (20°C, g/cm3)
	Dry	Wet	40°C	100°C		
DOT-3	Min. 205	Min. 140	Max. 1500	Min. 1.5	7.0 ~ 11.5	1.05 ~ 1.06
DOT-4	Min. 230	Min. 155	Max. 1800	Min. 1.5	7.0 ~ 11.5	-



S-OIL INDUSTRIAL & MARINE LUBRICANTS PRODUCT LINE

SUPER START, SUPER SUSTAIN, STRONG IMPRESSION!

S-OIL produces and supplies a wide range of high performance products to run systems in an efficient and stable way and to respond to various market demands by repeating continuous change and development.

HYDRUALIC OIL	S-OIL HI-PUMP	S-OIL HYDRO MASTER HV	S-OIL HYDRO SUPER	S-OIL 7 HYDRO FLUID AW	S-OIL 7 HYDRO FLUID AF	S-OIL HYDRO FLUID
INDUSTRIAL GEAR OIL	S-OIL GEAR OIL					
TURBINE OIL	S-OIL TURBINE GT	S-OIL TURBINE OIL				
SLIDE WAY OIL	S-OIL HI-WAY					
COMPRESSOR OIL	S-OIL COMPRESSOR P	S-OIL COMPRESSOR RS				
MECHANIC OIL	S-OIL MECHANIC OIL	S-OIL MECHANIC OIL AF				
PROCESS OIL	S-OIL PROCESS OIL					
TRANSFORMER OIL	S-OIL TRANSFORMER OIL LT	S-OIL TRANSFORMER OIL T/I	S-OIL TRANSFORMER OIL AS II			
SPRAY OIL	S-OIL SPRAY OIL					
MARINE OIL	S-OIL MARINE TP	S-OIL MARINE CL	S-OIL METAL SO			
GREASE	S-OIL GREASE MP/EP	S-OIL GREASE SUPER EP	S-OIL GREASE MOLY	S-OIL GREASE HT	S-OIL GREASE LT	

S-OIL HI-PUMP



Zinc-Free Industrial Hydraulic Fluid
For Wide Temperature Range

PRODUCT USE

· Suitable for a wide range of hydraulic power mobile applications under wide temperature range
· Any hydraulic system where risk of contamination of the environment and water exist
· Any application where an anti-wear, high VI and high performance oil is necessary
· Low toxicity towards the environment

PRODUCT PERFORMANCE

· Outstanding wear protection: Advanced Zinc-free additives ensure protection of machine parts
· Long fluid life: Reducing maintenance costs
· Maintaining system efficiency: Superior cleanliness and excellent filterability
· Environmentally friendly formulation: Prevent formation of deposit
· Extended temperature range capability

PERFORMANCE LEVEL

ISO 11158 (HV), Cincinnati Machine P68/P69/P70, AFNOR NFE 48603 (HM)
ASTM D6158 (HV), GM LH-04-1/LH-06-1/LH-15-1, US Steel 127/136,
SAE MS 1004 (HV), Eaton Vickers I-286-S/M-2950-S, Denison HF-0/HF-1/HF-2,
DIN 51524 PART II (HLP)/III (HVLP), Bosch Rexroth RE 90220

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
15	15.6	4	161	-50	206	0.837
22	22.3	4.9	153	L-40	230	0.836
32	32.6	6.4	151	-45	244	0.846
46	46.2	8.2	153	-40	250	0.848
68	67.7	10.9	150	-40	252	0.864
100	98.9	14.5	152	-37	256	0.873

S-OIL 7 HYDRO MASTER HV



Industrial Hydraulic Fluid
For Construction Equipment

PRODUCT USE

· Suitable for a variety of hydraulic power applications under a wide temperature range
· Mobile and exterior hydraulic equipment
· Any hydraulic systems where the risk of contamination of the environment and water exist
· Any applications where anti-wear and high viscosity index oil is necessary

PRODUCT PERFORMANCE

· Outstanding wear protection Ensuring protection of machine parts.
· Long fluid life Reducing maintenance costs.
· Superior cleanliness and excellent filterability maintain system efficiency
· Extended temperature range capability

PERFORMANCE LEVEL

Bosch Rexroth RDE 90235, Parker HF-0/1/2, Eaton E-FDGN-TB002-E, Fives P68/P69/P70,
DIN 51524-2/3, ISO 11158, GB 11118.1, ASTM D6158, SAE MS 1004, JCMAS P041 HK,
GM LS-2, AIST 126/127, SEB 181222

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
15	15.8	3.9	148	L-45	208	0.835
32	32.8	6.4	153	L-45	244	0.842
46	46.6	8.2	152	L-30	250	0.849
68	69.3	11.1	151	L-30	256	0.858

S-OIL HYDRO SUPER



Multi Purpose Anti-Wear Hydraulic Fluid

PRODUCT USE

· Industrial hydraulic system: Suitable for a wide range of hydraulic power applications
· Marine hydraulic system
· Any application where an anti-wear, high-performance oil is necessary

PRODUCT PERFORMANCE

· Excellent anti-wear properties ensuring protection of machine parts
· Great lubricity at high temperature thanks to base stock's high viscosity index
· Prevents formation of deposits in the circuit thanks to remarkable thermal stability cleaner circuits, less clogging of the filters
· Low pour point helps to reduce friction during operation at low temperature
· Reduced maintenance costs

PERFORMANCE LEVEL

Bosch Rexroth RDE 90235, ISO 11158 (HM/HV), SAE MS 1004 (HM/HV), GM LS-2,
DIN 51524-2/3 (HM/HV), Parker HF-0/1/2 (HM/HV), AIST 126/127, GB 1111.8 (L-HL/HM/HV/HS),
Eaton E-FDGN-TB002-E, JCMAS P041 HK, Fives P68/69/70 (HM/HV), ASTM D6158 (HM/HV)

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
32	32	6.1	133	-33	248	0.843
46	46	7.5	132	-27	258	0.848
68	68	9.4	117	-27	262	0.862

S-OIL 7 HYDRO FLUID AW



Industrial Hydraulic Fluid

PRODUCT USE

· Industrial hydraulic system suitable for a wide range of hydraulic power applications
· Applications where sludge and deposit form with conventional products
· Any application where an anti-wear, high-performance oil is necessary

PRODUCT PERFORMANCE

· Outstanding wear protection Ensuring protection of machine parts
· Long fluid life Reducing maintenance costs
· Maintanining system efficiency Superior cleanliness, excellent filterability

PERFORMANCE LEVEL

ISO 11158 (HM), Eaton Vickers M-2950-S/I-286-S, JCMAS HK
US Steel 127, Denison HF-0 (Hybrid Pump), GM LS-2/LH-03/LH-04/LH-06,
DIN 51524 PART II, Cincinnati Machine P68/P69/P70

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
10	10.8	2.8	106	-57	170	0.839
32	31.8	5.5	109	-35	230	0.860
46	45.2	6.9	108	-37	240	0.865
68	69.0	9.1	108	-35	244	0.870
100	102	11.7	103	-28	258	0.875
150	155	15.7	100	-24	266	0.883
220	216	19.0	98	-20	268	0.884

S-OIL 7 HYDRO FLUID AF



Ashleaa Anti-Wear Industrial Hydraulic Fluid

PRODUCT USE

· Any application where anti-wear and high-performance oil is necessary
· Applications where conventional products tend to form sludges and deposits
· Industrial hydraulic system: Suitable for a wide range of hydraulic power applications

PRODUCT PERFORMANCE

· Outstanding wear protection Ensuring protection of machine parts
· Reduced maintenance costs due to high oxidation and thermal stability
· Environmentally friendly formulation: Prevent formation of deposit
· Maintaining system efficiency: Superior cleanliness and excellent filterability

PERFORMANCE LEVEL

DIN 51524 PART 1/2, Cincinnati Machine P68/P69/P70, AFNOR NFE 48603 (HM),
US Steel 127/136, Eaton Vickers I-286-S/M-2950-S, Denison HF-0/HF-1/HF-2

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	32.7	5.6	108	-30	218
46	45.8	7.6	130	-30	256
68	68.6	9.2	109	-30	228

S-OIL HYDRO FLUID



Rust & Oxidation Hydraulic Oil

PRODUCT USE

· Designed for use in all kind of hydraulic system operating under high pressure and normal temperature conditions such as in machine tools, injection mold machine, presses and other industrial equipment
· Used in many other applications where a universal anti-wear lubricant is the first choice:low charged gears, sliding and roller bearings

PRODUCT PERFORMANCE

· Good resistance to oxidation avoiding formation of sludge at normal operation temperature and ensuring a long service life of the fluid
· Outstanding anti-foam ability for equipment trouble control
· Good filterability even in the presence of water
· Excellent protection against rust and corrosion
· Good demulsibility ensuring rapid water separation

PERFORMANCE LEVEL

DIN 51524 PART I (HL), ISO 11158 (HL Fluids), Cincinnati Machine P38/P54/P55

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
32	32	5.4	104	-35	218	0.863
46	46.1	6.8	99	-37	228	0.868
68	67.6	8.8	102	-35	238	0.874

S-OIL GEAR OIL



High Performance Industrial Gear Oil

PRODUCT USE

· Recommended for all types of industrial equipment in mild load EP condition

PRODUCT PERFORMANCE

· Excellent thermal and oxidation stability to prevent downtime or troubles
· Excellent EP and anti-wear properties
· Good separation between water and lubricants
· Improved fluidity in cold condition helps efficiently in any weather condition

PERFORMANCE LEVEL

U.S. Steel 224, DIN 51517 PART 3, AGMA 9005-EO2,
David Brown S1.53.101, Fives Cincinnati Gear Oils, ISO 12925-1 CKC/CKD

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
100	100.1	11.6	104	-25	260
150	150.3	15.1	100	-19	268
220	218.9	19.2	100	-17	264
320	316.6	24.3	97	-16	260
460	456.9	30.5	96	-15	306

S-OIL TURBINE GT



Industrial gas, Steam and
Combined Cycle Turbine Oil

PRODUCT USE

· High temperature g as and power generation combined cycle turbines
· Steam and hydraulic turbines

PRODUCT PERFORMANCE

· Good resistance to oxidation makes avoiding formation of sludge at high temperature
· Reduced maintenance costs due to high thermal stability
· Excellent protection against rust and corrosion
· Outstanding demulsibility ensuring rapid water separation to protecting premature wear

PERFORMANCE LEVEL

Siemens TLV 9013 04 /05 non EP, Solar ES9 224W, GEK 107395A 32568 K/ 27070 28143B 46506E,
British Standard BS489, MAN Turbo Quality Requirements for Lubricants, GB 11120 2011 Premium Grade,
ALSTOM HTGD 90 117 V0001W non EP, ASTM D4304 06a Type I/III, DIN 51515 Parts I II, ISO 8068 L TSA/TGA

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	31.5	5.9	135	-17	256
46	45.7	7.6	131	-15	268

S-OIL TURBINE OIL



Synthetic Industrial Turbine Oil

PRODUCT USE

· Steam & Hydraulic turbines operating under all service conditions

PRODUCT PERFORMANCE

· Good anti-foam performance for equipment trouble control
· Good filterability even in the presence of water
· Environmental friendly formulation with ashless additive technology
· Excellent protection against rust and corrosion
· Good demulsibility ensuring rapid water separation
· Reduced maintenance costs due to high oxidation and thermal stability
· Good resistance to oxidation avoiding formation of sludge at normal operation temperature

PERFORMANCE LEVEL

SIEMENS AG TLV 9013 04/05, BRITISH STANDARD BS 489, DIN 51515 Part 1/2, DIN 51524, GEK 32568R, ASTM D-4304 TYPE I/ II/ III, INDIAN STANDARD IS 1012, DIN 51506 VDL, ALSTOM HTGD 90117, ISO 8068 TSA and TGA

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	32.6	5.5	105	-16	242
46	45.1	6.9	107	-24	250

S-OIL HI-WAY



High Performance Machine Tool Slideway Oil

PRODUCT USE

· Suitable for use in machine tool of slides, tables and feed mechanisms

PRODUCT PERFORMANCE

· Good separation between coolant and slideway, maintain initial lubrication performance after separation
· Good frictional property thanks to high performance friction modifier and anti-wear additive prevents stick-slip and provides increased speed of operation and decreased shutdowns
· Sufficient adhesive lubrication films prevent wear and damage on the surface of your machines
· Good thermal and oxidation stability provides long oil life and stable operation

PERFORMANCE LEVEL

Cincinnati Milacron P-47, GM LS-2

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)	Specific gravity
	40°C	100°C				
32	32	5.4	108	L-40	220	0.863
46	46	7	113	L-40	222	0.866
68	68	9.3	108	-35	226	0.872
220	220	19.4	100	-18	256	0.886

S-OIL COMPRESSOR P



Long Life Reciprocating Compressor Oil

PRODUCT USE

· Reciprocating compressors operating with temperature of up to 220°C in air compressors

PRODUCT PERFORMANCE

· Outstanding oxidation and thermal stability provides longer oil life and reduction of maintenance cost
· Effectively reduce the formation of sludge and deposit even in high temperature condition, so it provides continuous efficient operation
· Excellent rust and copper corrosion control protect your part and prevents oil deterioration
· Outstanding wear protection minimizes wear of metal surfaces such as valve, ring and cylinders
· Excellent water separation performance helps maintain normal operation condition and reliable operation
· Prevention of emulsification and greening of drains, contributing to laborsaving

PERFORMANCE LEVEL

DIN 51506 VDL

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	32.6	5.5	107	-32	222
46	46.9	7.1	108	-34	230
68	68.4	9.0	107	-37	238
100	100.4	11.6	104	-37	252

S-OIL COMPRESSOR RS



Long-Life Rotary Screw Compressor Oil

PRODUCT USE

· Oil injection rotary and screw type air compressor

PRODUCT PERFORMANCE

· Outstanding oxidation and thermal stability provides longer oil life and reduction of maintenance cost
· Effectively reduce the formation of sludge and deposit even in high temperature condition, it provides continuous efficient operation
· Excellent rust and Copper corrosion control to protect your parts such as valves, rings and cylinders.
· Excellent water separation performancehelps maintain normal operation condition and reliable operation
· Very severely hydro-treated base oil and selected additive system provides excellent low temperature fluidity and low volatility to prevent oil carryover or trouble under cold whether

PERFORMANCE LEVEL

DIN 51506 VDL ISO DP 6521/6743 L-DAG/6743 L-DAH

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	31.9	5.9	133	-35	238
46	46.1	7.6	131	-31	258
68	67.8	9.2	111	-29	260

S-OIL MECHANIC OIL



Synthetic Technology
Ashless General Purpose Mechanical Oil

PRODUCT USE

· General purpose industrial applications
· Industrial gear cases under moderate operating condition
· Hydraulic system where rust and oxidation prevention performance required.
· Industrial circulation system
· Steam or hydraulic turbine or bearings

PRODUCT PERFORMANCE

· Long service life of the fluid thanks to high quality synthetic base oil.
· Reduced maintenance costs due to high oxidation and thermal stability
· Good anti-foam performance for equipment trouble control
· Excellent protection against rust and corrosion
· Good filterability even in the presence of water
· Good water separation performance
· Good resistance to oxidation avoiding formation of sludge at normal operation temperature

PERFORMANCE LEVEL

General purpose product

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
32	32.4	5.9	129	-37	241
46	46.1	7.8	130	-31	245
68	68.1	9.4	119	-29	253
100	101.5	11.8	105	-28	254
220	221.4	19.4	99	-18	272
320	319.4	24.4	97	-16	290

S-OIL MECHANIC OIL AF



Ashless Anti-Wear Mechanic Oil
For Industrial Machinery

PRODUCT USE

· General purpose industrial applications
· Any application where anti-wear and high-performance oil is necessary
· Industrial circulation system
· Hydraulic systems where contamination and water ingress may occur

PRODUCT PERFORMANCE

· Outstanding wear protection: Advanced Zinc-free additives ensure protection of machine parts
· Reduced maintenance costs due to high oxidation and thermal stability
· Good anti-foam performance for equipment trouble control
· Environmentally friendly formulation: Prevent formation of deposit
· Good filterability even in the presence of water

PERFORMANCE LEVEL

DIN 51524 PART 1/2, Cincinnati Machine P68/P69/P70, AFNOR NFE 48603 (HM)
US Steel 127/136, Eaton Vickers I-286-S/M-2950-S, Denison HF-0/HF-1/HF-2

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
ISO VG 100	99.8	11.7	106	-23	260
ISO VG 150	149.7	15.1	101	-14	276
ISO VG 220	222.4	19.3	98	-12	284
ISO VG 320	320.5	24.4	97	-12	294

S-OIL PROCESS OIL



Highly Refined Paraffinic Process Oil

PRODUCT USE

· Sealant,coatings, polymer production, deformer, rubber machine, asphalt extender
· Automotive under hood parts, moldings, sound and vibration dampening material, tires
· Textile industry
· Heat transfer fluids
· Wire and cable insulation, sheathing

PRODUCT PERFORMANCE

· Wide range of viscosities
· Improved process efficiency by low evaporation loss at high temperature
· Highly saturated andlow aromatic content
· Excellent oxidation stability
· Light-colored and very good color stability

TYPICAL PROPERTIES

SAE viscosity	Kinematic viscosity, mm²/s(cSt)		Viscosity index	Pour point (°C)	Flash point (°C)
	40°C	100°C			
60	7.6	2.3	103	-36	158
70	14	3.4	115	-27	202
80	15.9	3.6	112	-24	208
100+	19.7	4.3	124	-20	220
150	29.7	5.2	105	-18	218
150+	32.5	6.0	134	-16	240
250+	41.1	7.1	134	-14	250
500	96.4	11.3	104	-18	240
150S	30.5	5.2	101	-12	212
500S	95.9	11.2	96	-14	258
480	488.6	31.9	96	-14	316
60D	8.0	2.2	72	-17	150
350	66.9	9.3	117	-14	240
600	11.70	12.5	98	-14	259

S-OIL TRANSFORMER OIL LT



High Performance
Alkylbenzens Electrical Insulating Oil

PRODUCT USE

· Power transformers, distribution transformers, converters, rectifier, circuit breakers and switchgear

PRODUCT PERFORMANCE

· Excellent oxidation stability with selected anti-oxidant provides extended oil life and stable operation
· Proved anti-corrosion performance with very low Sulfur contents
· Good low temperature fluidity provides continuous operation regardless of any weather condition
· Effective cooling and heat transfer performance and very good dielectric properties
· No impurities such as water, dissolved gas, DBDS, suspended solid and PCB

PERFORMANCE LEVEL

IEC 60867 Class I (Alkylbenzenes), KS C 2301 Class 2-3

TYPICAL PROPERTIES

PROPERTIES	VISCOSITY INDEX	S-OIL TRANSFORMER OIL LT
Appearance	-	Clear
Density @ 15°C	g/cm3	0.8498
Viscosity at 40°C	cSt	4.98
Viscosity at 100°C	cSt	1.6
Pour Point	°C	< - 70
Flash Point	°C	155
Acidity	mg KOH/g	< 0.01
Water Content	mg/kg	23
Breakdown Voltage (untreated/treated)	kV	75
Dissipation Factor at 90°C	-	< 0.002
Potentially Corrosive Sulfur	-	Non Corrosive

S-OIL TRANSFORMER OIL T/I



Highly Refined Hydrotreated
Electrical Insulating Oil (Trace-inhibited / Inhibited)

PRODUCT USE

· Power transformers, distribution transformers, converters, rectifier, circuit breakers and switchgear

PRODUCT PERFORMANCE

· Excellent oxidation stability with selected anti-oxidant provides extended oil life and stable operation
· Proved anti-corrosion performance with very low Sulfur contents
· Good low temperature fluidity provides continuous operation regardless of any weather condition
· Effective cooling and heat transfer performance and very good dielectric properties
· No impurities such as water, dissolved gas, DBDS, suspended solid and PCB

PERFORMANCE LEVEL

IEC 60296:2012 Table 2 transformer oil (T), (I)

TYPICAL PROPERTIES

PROPERTIES	UNITS	S-OIL TRANSFORMER OIL T	S-OIL TRANSFORMER OIL I
Appearance	-	Clear	Clear
Density @ 15°C	g/cm^3	0.829	0.826
Viscosity at -30°C	cSt	284	269
Viscosity at 40°C	cSt	7.49	7.48
Viscosity at 100°C	cSt	2.22	2.22
Pour Point	°C	-55	-55
Flash Point	°C	159	151
Acidity	mg KOH/g	< 0.01	< 0.01
Oxidation Stability	-	-	-
- Total Acidity	mg KOH/g	< 0.01	0.02
- Sludge	wt%	< 0.01	< 0.01
- DDF @ 90°C	-	0.0006	0.0009
Inhibitors of IEC 60666	wt%	0.06	0.34
Water Content	mg/kg	4	3
Breakdown Voltage (untreated/treated)	kV	78/81	76/80
Dissipation Factor at 90°C	-	0.0003	0.0003
Corrosive Sulfur	-	Non Corrosive	Non Corrosive
Potentially Corrosive Sulfur	-	Non Corrosive	Non Corrosive
PCBs	mg/kg	Undetectable	Undetectable
DBDS	mg/kg	Undetectable	Undetectable
Metal Passivator additives	mg/kg	Undetectable	Undetectable
Furfural and related compounds	mg/kg	Undetectable	Undetectable

S-OIL TRANSFORMER OIL AS II



Highly Refined Hydrotreated
Electrical Insulating Oil

PRODUCT USE

· Power transformers, distribution transformers, converters, rectifier, circuit breakers and switchgear

PRODUCT PERFORMANCE

· Excellent oxidation stability with selected anti-oxidant provides extended oil life and stable operation
· Proved anti-corrosion performance with very low Sulfur contents
· Good low temperature fluidity provides continuous operation regardless of any weather condition
· Effective cooling and heat transfer performance and very good dielectric properties
· No impurities such as water, dissolved gas, DBDS, suspended solid and PCB

PERFORMANCE LEVEL

ASTM D3487 Type II

TYPICAL PROPERTIES

PROPERTIES	UNITS	METHOD	TYPICAL VALUE
Color, ASTM	-	ASTM D1500	L0.5
Density @ 15°C	g/cm^3	ASTM D4052	0.83
Kinematic Viscosity, 40°C	cSt	ASTM D445	8.6
Kinematic Viscosity, 100°C	%	ASTM D445	2.4
Kinematic Viscosity, 0°C	cSt	ASTM D445	44
Aniline Point	-	ASTM D611	99
Power Factor, 60Hz, 25°C	%	ASTM D924	Not detectable
Power Factor, 60Hz, 100°C	%	ASTM D924	Not detectable
Flash Point, COC	-	ASTM D92	164
Pour Point	°C	ASTM D97	-51
Interfacial Tension	mN/m	ASTM D971	46
Water Content	mg/kg	ASTM D1533	10
Corrosive Sulfur	-	ASTM D1275	Non corrosive
PCB content	mg/kg	ASTM D4059	Not detectable
Dielectric Breakdwon Voltage @60Hz, 1 mm	kV	ASTM D1816	35
Dielectric Breakdwon Voltage @60Hz, 2 mm	kV	ASTM D1816	52
Dielectric Breakdwon Voltage @60Hz, 2.5 mm	kV	ASTM D1816	80
Gassing Tendency	㎕/min	ASTM D2300	25
Oxidation Stability, 72h - Sludge	w%	ASTM D2440	0
Oxidation Stability, 72h - TAN	mgKOH/g	ASTM D2440	0.1
Oxidation Stability, 16h - Sludge	w%	ASTM D2440	0
Oxidation Stability, 16h - TAN	mgKOH/g	ASTM D2440	0
Oxidation stability (pressure vessel test)	min	ASTM D2112	681
2 Furfural Content	㎍/L	ASTM D5837	Not detectable
Neutralization Number	mgKOH/g	ASTM D974	Not detectable
Phenolic Antioxidant Additive	%	ASTM D2668	0.25

S-OIL SPRAY OIL



Highly Refined Agricultural Spray Oil

PRODUCT USE

· Agricultural and horticultural spray applications
· Crop and fruit protection and pest control

PRODUCT PERFORMANCE

· Formulated with NSF-certified highly refined mineral oil
· Designed for use on various crops and ornamentals
· Good formulation compatibility with various agrochemical products
· Suitable for Integrated Pest and Disease Management programs

TYPICAL PROPERTIES

PROPERTIES	UNIT	SPRAY OIL
50% Distillation Temp	°C	395
Flash Point	°C	202
Pour Point	°C	-28

S-OIL MARINE TP



Medium-Speed Trunk-Piston
Diesel Engine Oil

PRODUCT USE

· OIL MARINE TP series are primarily recommended for use in high-output trunk piston marine diesel engines operating on heavy residual fuels

PRODUCT PERFORMANCE

· Improved anti wear properties, reduces ring & liner wear.
· Reduces port and under crown deposits.
· Cleaner engine operation.
· Increased protection against cylinder and bearing wear.
· Outstanding thermal & oxidation stability extend periods between inspection & overhauling.
· Controls black sludge deposts thus increasing oil filter life and reduces cleanding frequencies.
· Excellent TBN retention with low oil consumption

PERFORMANCE LEVEL

SAE 30, 40

TYPICAL PROPERTIES

PRODUCTS	TBN	SAE	Kinematic viscosity, mm²/s(cSt)			Pour point(°C)	Flash point(°C)
			40°C	100°C	Viscosity index		
TP 1230	12	30	98.3	11.6	106	-20	254
TP 1240	12	40	128.2	13.9	106	-19	256
TP 1530	15	30	96.2	11.5	107	-20	250
TP 1540	15	40	129.4	14.0	106	-18	272
TP 3030	30	30	93.06	11.4	111	-16	246
TP 3040	30	40	125.6	14.0	110	-14	258
TP 4030	40	30	91.36	11.4	113	-14	248
TP 4040	40	40	122.7	14.0	112	-13	258

S-OIL MARINE CL



Cylinder Lubricant
For 2-Stroke Low Speed Diesel Engine

PRODUCT USE

· S-OIL MARINE CL Series are recommended as a cylinder lubricant for all types of slow speed cross-head two stroke diesel

PRODUCT PERFORMANCE

· Use strong alkali additives to prevents corrosion wear of the cylinder liners
· High viscosity index maintain a strong film strength at high temperature
· Outstanding detergency capability leads to cleander piston rings and liners
· Excellent thermal stability can lead to reduced carbon deposits and sludge formation

PERFORMANCE LEVEL

MAN (2550, 7050, 10050)

TYPICAL PROPERTIES

PRODUCTS	TBN	SAE	Kinematic viscosity, mm²/s(cSt)			Pour point(°C)	Flash point(°C)
			40°C	100°C	Viscosity index		
CL2540	25	40	126.5	14.0	107	-15	249
CL 2550	25	50	214.9	19.8	105	-14	272
CL 4050	40	50	220.2	19.7	102	-37.5	256
CL5040	55	40	127.1	14.1	109	-27	264
CL 5050	55	50	209.8	19.4	105	-28	260
CL 7050	70	50	211.7	19.6	105	-26	268
CL 10050	100	50	202.6	19.4	109	-29	258

S-OIL MARINE SO



High Quality Marine System Oil

APPLICATIONS

· S-OIL MARINE SO series are a high performance system oil that ensures enhanced cleanliness for two-stroke, crosshead type marine diesel engines operating under severe conditions.

ADVANTAGES

· Clean crankcase and circulation tanks
· Outstanding piston-cooling efficiency
· Increase protection against gear and bearing load carrying
· Provide improved rust protection
· Excellent water tolerance and separation
· Superior FZG performance and retention without impact to demulsibility

PERFORMANCE LEVEL

MAN(SAE 30)

TYPICAL PROPERTIES

PRODUCTS	TBN	SAE	Kinematic viscosity, mm²/s(cSt)			Pour point(°C)	Flash point(°C)
			40°C	100°C	Viscosity index		
SO 0520	5	20	61.3	8.5	110	-19	241
SO 0530	5	30	97.4	11.5	106	-18	254
SO 0540	5	40	139.3	14.5	103	-18	256

S-OIL GREASE MP



Multipurpose Extreme Pressure Grease

APPLICATIONS

· Various wear-resistant bearings
· Joint and spline shafts
· Area requiring extreme pressure and anti-wear resistance

ADVANTAGES

· Excellent resistance for extreme pressure and anti-wear
· Good oxidation stability
· Service temperature: -30°C ~ +150°C

MAIN COMPONENTS

· Lithium soap thickener
· High-refined mineral oil
· Oxidation Inhibitor

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Pale Brown
Worked Penetration 25°C	ASTM D 217	0.1mm	364
Dropping Point	ASTM D 566	°C	193
Copper strip corrosion	ASTM D 4048	-	1a

S-OIL GREASE EP



Multipurpose Extreme Pressure Grease

APPLICATIONS

· All sorts of bearings
· Joint and spline shafts
· Any parts for EP and anti-wear property

ADVANTAGES

· Excellent resistance for extreme pressure
· Good oxidation stability
· Anti-wear property
· Service temperature: -30°C ~ +150°C

MAIN COMPONENTS

· Lithium soap thickener
· Refined mineral oil
· EP additives

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Dark Brown
Worked Penetration 25°C	ASTM D 217	0.1mm	362
Dropping Point	ASTM D 566	°C	194
Copper strip corrosion	ASTM D 4048	-	1a

S-OIL GREASE SUPER EP



Multipurpose Lithium Grease

APPLICATIONS

· All sorts of bearing
· Joint and spline shaft
· Any parts for EP and anti-wear property

ADVANTAGES

· Excellent resistance for extreme pressure
· Good oxidation stability
· Anti-wear property
· Service temperature: -30°C ~ +150°C

MAIN COMPONENTS

· Lithium soap thickener
· Refined mineral oil
· EP additives

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Yellow
Worked Penetration 25°C	ASTM D 217	0.1mm	275
Dropping Point	ASTM D 566	°C	220
Copper strip corrosion	ASTM D 4048	-	1a

S-OIL GREASE MOLY



Multipurpose Extreme
Pressure lithium Grease With Molybdenum Disulfide

APPLICATIONS

· All sorts of bearing under E.P
· Joint and spline shaft
· Any parts for EP and anti-wear property

ADVANTAGES

· Excellent resistance for extreme pressure
· Good oxidation stability
· Good anti-wear and anti-corrosion property
· Service temperature: -30°C ~ +150°C

MAIN COMPONENTS

· Lithium soap thickener
· Refined mineral oil
· Additives for EP, oxidation stability and anti-wear property

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Black
Worked Penetration 25°C	ASTM D 217	0.1mm	272
Dropping Point	ASTM D 566	°C	195
Copper strip corrosion	ASTM D 4048	-	1a
4-Ball EP	ASTM D 2596	kgf	400

S-OIL GREASE HT



Lithium Complex Wheel Bearing Grease

APPLICATIONS

· Sintering part in steel industry, Guide roller bearing of serial steel casting foundry, pinch roll bearing
· A drying tumbler, revolving furnace, ventilation fan for high temperature
· A sort of bearing under high temperature and corrosion environment

ADVANTAGES

· Good high temp. property
· Good water-resistance
· Good mechanical stability
· Service temperature: -30°C ~ +200°C

MAIN COMPONENTS

· Lithium-complex soap thickener
· High-refined mineral oil
· Anti-wear & oxidant additive

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Yellow
Worked Penetration 25°C	ASTM D 217	0.1mm	281
Dropping Point	ASTM D 566	°C	258
Copper strip corrosion	ASTM D 4048	-	1a
4-Ball EP	ASTM D 2596	kgf	250

S-OIL GREASE LT



Low Temperature Lithium Grease

APPLICATIONS

· Lubrication for plastic to plastic
· Lubrication for metal to metal
· Lubrication for metal to plastic
· Parts requiring non-spread oils

ADVANTAGES

· Excellent compatibility between plastic and steel lubrication
· Good rust resistance and oxidation stability
· Anti-wear and anti-load properties
· Service temperature: -40°C ~ +150°C

MAIN COMPONENTS

· Lithium soap thickener
· Refined mineral oil
· Special solid lubricants

TYPICAL PROPERTIES

TEST ITEMS	METHOD	UNIT	PROPERTIES
Appearance	-	-	Light Yellow
Worked Penetration 25°C	ASTM D 217	0.1mm	280
Dropping Point	ASTM D 566	°C	201
Copper strip corrosion	ASTM D 4048	-	1a

CERTIFICATE

API

API

ACEA

Mercedez Benz

General Motors

STJLR

Stellantis

MAN

Daimler Chrysler

Daimler Chrysler

JASO

Siemens

ZF

ZF

MAN Marine

NMMA

POSCO

HKMC

PCF

Centralbio

Centralbio

NSF

ISO

ISO

S-OIL LUBRICANTS PRODUCT GUIDE

2026

PUBLISHED BY S-OIL FINISHED LUBRICANTS BUSINESS TEAM

COPYRIGHT©S-OIL CORPORATION CO.,LTD ALL RIGHT RESERVED.

S-OIL Bldg., 192, Baekbeom-ro, Mapo-gu, Seoul, 04196, Korea / Business Inquiry | lubricants@s-oil.com / Homepage | www.s-oil7.com