Titan – SM [©]



Automobile engine o<u>ils</u>

WE CREATE CONDITIONS FOR GROWTH



Group of Companies Titan

It is the largest company in Siberia, one of the key investors of Omsk region. It was founded in 1989 by Mikhail Sutyaginsky.

It includes about 20 enterprises of the petrochemical and agro-industrial complex, as well as infrastructure enterprises.

The main production site of the company is located on the territory of Omsk region; subsidiaries and affiliates are represented in the regions of Russia (Moscow, St. Petersburg, Novocherkassk, Pskov, Ufa, etc.) and the CIS countries. The number of employees of the Group's enterprises is about 4500 people

Titan-SM, Limited company

The production facilities of Titan-SM, Limited company are based on process units producing lubricants, oils and process fluids for different industries: oil and gas, mechanical engineering, metallurgy and metalworking, instrument making, automotive and railway transport industries, as well as for the defense complex. The enterprise facilities allow to produce more than 12 000 tons of lubricants and over 23 000 tons of process fluids per year.

The plant operates using a **unique technology** based on dry boiling-off due to which energy costs are significantly reduced and end product quality is maintained. The production process is practically wastefree due to the closed processing cycle.

The product quality is a determinant factor of the activity of Titan-SM Limited company. The quality control of each production stage is conducted by the Quality Control Division of the production testing laboratory possessing all the necessary modern equipment.

The center of research works is represented by an **experimental industrial laboratory** which activity is aimed at creating new products and effective production technologies.

The **range of products** includes products based on petroleum and synthetic oils - engine, transmission, hydraulic oils; greases; lubricants; metalworking fluids; release fluids; friction modifiers and drilling fluid components. The products of Titan-SM, Limited company are certified and approved by VNIIZhT JSC (All-Russian Railway Research Institute), VNIINP JSC (All-Russian Research Institute of Oil Refining), ROSNITI (Russian Research Institute of Pipe Industry) and Gazprom VNIIGAZ LLC (All-Russian Scientific Research Institute of Natural Gases and Gas Technologies).

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AUTOEXPRESS AVANGUARD API CI-4/SL

Application

A range of premium semi-synthetic all-season oils manufactured from synthetic and refined mineral base oils using a highly effective, carefully balanced package of imported additives.

The series is designed for highly stressed diesel engines, including turbocharged diesels, which operate in particularly severe conditions and with long service intervals. They can also be used in diesel engines where API CH-4 and CG-4 oils are recommended. They are applicable for diesel engines of the latest generation meeting the Euro-1, Euro-2, Euro-3, Euro-4 emission requirements (without diesel retrofitting soot filters (DPF).

AUTOEXPRESS AVANGUARD semi-synthetic oils, API CI-4/SL SAE 5W-40, 10W-30 and 10W-40, are characterized by improved low-temperature properties and make it easier to start the engine at sub-zero temperatures. The oil of viscosity grade SAE 20W-50 is particularly recommended in regions with hot climatic conditions.

They are also suitable for use in highly accelerated petrol and diesel engines with direct fuel injection in accordance with the manufacturer's recommendation.

Indicator name	SAE 5W40 API CI- 4/SL	SAE 10W30 API CI-4/SL	SAE 10W40 API CI-4/SL	SAE 15W40 API CI-4/SL	SAE 20W50 API CI-4/SL	Testing methods
Kinematic viscosity at 100 °C, mm²/s	13,5-16,3	9,3-12,5	13,5-16,3	13,5-16,3	16,3-21,9	GOST 33 or ASTM D445
Viscosity index	150	150	150	130	130	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	6600 at -30 °C	7000 at -30 °C	7000 at -30 °C	7000 at -20 °C	7000 at -20 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	60 000 at -35 °C	60 000 at -30 °C	60000 at -30 °C	60 000 at -25 °C	60 000 at -20 °C	GOST P 52257 or ASTM D4684
TBN mg KOH per 1 g oil	9	9	9	9	9	GOST 30050 or ASTM D2896
Sulphated ash content, %	1,5	1,5	1,5	1,5	1,5	GOST 12417 or ASTM D874
Pour point, °C	-40	-35	-35	-30	-25	GOST 20287 Method B
Evaporating by NOACK, $\%$	15	15	15	13	13	ASTM D5800 or DIN 51581-1





AUTOEXPRESS AVANGUARD API CH-4/CG-4/SJ

Application

AUTOEXPRESS AVANGUARD oils can be used in highly accelerated diesel engines of passenger cars, vans and light trucks as recommended by the equipment manufacturer.

Indicator name	SAE 10W30 API CH-4/ CG-4/SJ	SAE 10W40 API CH-4/ CG-4/SJ	SAE 15W40 API CH-4/ CG-4/SJ	SAE 20W50 API CH-4/ CG-4/SJ	Testing methods
Kinematic viscosity at 100 °C, mm²/s	9,3-12,5	13,5-16,3	13,5-16,3	16,3-21,9	GOST 33 or ASTM D445
Viscosity index	120	120	120	110	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	7000 at -25 °C	7000 at -25 °C	7000 at -20 °C	9500 at -15 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	60 000 at -30 °C	60 000 at -30 °C	60 000 at -25 °C	60 000 at -20 °C	GOST P 52257 or ASTM D4684
TBN, mg KOH per 1 g oil	8	8	8	8	GOST 30050 or ASTM D2896
Sulphated ash content, %	1,5	1,5	1,5	1,5	GOST 12417 or ASTM D874
Pour point, °C	- 30	- 30	-25	-20	GOST 20287 Method B
Evaporating by NOACK, %	15	15	13	13	ASTM D5800 or DIN 51581-1





AUTOEXPRESS AVANGUARD API CF-4/SG M

Application

These engine oils are recommended for use in modern high-speed four-stroke supercharged diesel engines in Russian heavy duty trucks and can also be used in a number of foreign and Russian heavy duty diesel engines, where the operating instructions recommend CF-4, CF, CD oils.

CF/CD/SF oils can be used in modern foreign heavy duty diesel engines. They also provide effective lubrication for highly accelerated diesel engines for which CF and lower oils are recommended.

Indicator name	SAE 10W30 API CF-4/SG	SAE 10W40 API CF-4/SG	SAE 15W40 API CF-4/SG	SAE 20W50 API CF-4/SG	Testing methods
Kinematic viscosity at 100 °C, mm²/s	9,3-12,5	13,5-16,3	13,5-16,3	16,3-21,9	GOST 33 or ASTM D445
Viscosity index	120	120	120	110	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	7000 at -25 °C	7000 at -25 °C	7000 at -20 °C	9500 at -15 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	60 000 at -30 °C	60 000 at -30 °C	60 000 at -25 °C	60 000 at -20 °C	GOST P 52257 or ASTM D4684
TBN, mg KOH per 1 g oil	6,5	6,5	6,5	6,5	GOST 30050 or ASTM D2896
Pour point, °C	- 30	- 30	-25	-20	GOST 20287 Method B
Evaporating by NOACK, $\%$	15	15	15	15	ASTM D5800 or DIN 51581-1







AUTOEXPRESS AVANGUARD SAE 30, 40, 50

Application

A series of high-quality seasonal (summer ones, according to SAE J 300) engine oils. The oils comply with GOST 17479.1-85: M-10,12 (SAE 30), M-14,16 (SAE 40), M-20 (SAE 50).

AUTOEXPRESS AVANGUARD SAE 30, 40, 50 are based on highly refined mineral base oils of own production and a carefully selected additive package. These oils have better detergent, antioxidant and antiwear properties compared to GOST motor oils of G and D quality level. Application of the AUTOEXPRESS AVANGUARD API CF/CD/SF oils allows extending the oil change interval up to 40% comparing to M-HG2k, M-HDM oils. Wide range of viscosity grades allows selecting optimum product depending on operating conditions.

AUTOEXPRESS AVANGUARD SAE 30, 40, 50 is a series of oils designed for heavy duty truck diesel engines. Also recommended for truck and car diesel engines and non-inflated petrol engines in accordance with the manufacturer's recommendation. Suitable for diesel and petrol engines with environmental emissions not exceeding Euro 2 level.

They are effective in engines of off-road, municipal, construction, agricultural machinery of domestic manufacture, which are equipped with YAMZ and KAMAZ engines (up to Euro-2 level), requiring an engine oil with performance level no higher than API CF/SD/SF.

AUTOEXPRESS AVANGUARD SAE 40 is recommended for engines in vehicles operating in southern regions or where the engine oil viscosity of M-10 type is insufficient.

Indicator name	SAE 30 API CF/CD/SF	SAE 40 API CF/CD/SF	SAE 50 API CF/CD/SF	Testing methods
Kinematic viscosity at 100 °C, mm²/s	9,3-12,5	12,5-16,3	16,3-21,9	GOST 33 or ASTM D445
Viscosity index	100	100	95	GOST 25371 or ASTM D2270
Sulphated ash content, %	1	1	1	GOST 12417 or ASTM D874
Open-cup flash point, °C	220	220	220	GOST 30050 or ASTM D2896
Pour point, °C	-20	-20	-15	GOST 20287 Method B
Evaporating by NOACK, $\%$	20	20	20	ASTM D5800 or DIN 51581-1
Tendency to foaming, cm ³ , maximum: at 24 °C at 94 °C at 24 °C after testing at 94 °C	10/0 20/0 10/0	10/0 20/0 10/0	10/0 20/0 10/0	ASTM D892





AUTOEXPRESS OPTIMA

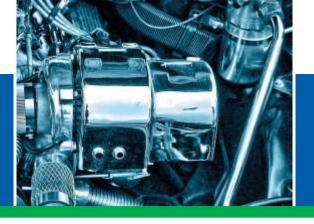
Application

A series of high-quality, all-season engine oils on a semi-synthetic and mineral basis. They are designed for operation of atmospheric forced gasoline and diesel (moderately supercharged) engines of passenger cars, vans and trucks.

AUTOEXPRESS OPTIMA oils in their performance characteristics meet the requirements of the SL/CF categories according to API classification and are recommended for use in modern foreign petrol engines, including multi-valve, turbocharged and catalytic converters. They are also recommended for use in turbocharged (and non-turbocharged) diesel engines in passenger cars, light trucks and vans.

Indicator name	SAE 5W30 API SL/CF	SAE 5W40 API SL/CF	SAE 10W40 API SL/CF	SAE 15W40 API SL/CF	Testing methods
Kinematic viscosity at 100 °C, mm²/s	9,3-12,5	12,5-16,3	12,5-16,3	12,5-16,3	GOST 33 or ASTM D445
Viscosity index	120	140	125	120	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	6600 at -30 °C	6600 at -30 °C	7000 at -25 °C	7000 at -20 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	60 000 at -35 °C	60 000 at -35 °C	60 000 at -30 °C	60 000 at -25 °C	GOST P 52257 or ASTM D4684
TBN, mg KOH per 1 g oil	8,5	7,5	7,5	7,5	GOST 30050 or ASTM D2896
Sulphated ash content, %	1,20	1,3	1,3	1,3	GOST 12417 or ASTM D874
Open-cup flash point, $^\circ\text{C}$	190	200	210	210	GOST 4333 or ASTM D92
Pour point, °C	-40	-40	- 32	-27	GOST 20287 Method B
Evaporating by NOACK, $\%$	15	13	13	13	ASTM D5800 or DIN 51581-1





AUTOEXPRESS OPTIMA

Application

AUTOEXPRESS OPTIMA oils in their performance characteristics meet the requirements of the SG/CD categories of API classification and are recommended for use in modern foreign petrol engines, including multi-valve, turbocharged and catalytic converters. They are also recommended for use in turbocharged (and non-turbocharged) diesel engines in passenger cars, light trucks and vans.

AUTOEXPRESS OPTIMA engine oils of SG/CD category are designed to lubricate modern Russian as well as some foreign forced-injection gasoline engines without a supercharger and mildly supercharged diesel engines in passenger cars, vans and light trucks, for which category SG/CD or category SF/CC oils are recommended.

Indicator name	SAE 5W40 API SG/CD	SAE 10W40 API SG/CD	SAE 15W40 API SG/CD	SAE 20W50 API SG/CD	Testing methods
Kinematic viscosity at 100 °C, mm²/s	12,5-16,3	12,5-16,3	12,5-16,3	16,3-21,9	GOST 33 or ASTM D445
Viscosity index	130	130	120	110	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	6600 at -30 °C	7000 at -25 °C	7000 at -20 °C	9500 at -15 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	60 000 at -35 °C	60 000 at -30 °C	60 000 at -25 °C	60 000 at -20 °C	GOST P 52257 or ASTM D4684
TBN, mg KOH per 1 g oil	6	6	6	6	GOST 30050 or ASTM D2896
Sulphated ash content, %,	1,3	1,3	1,3	1,3	GOST 12417 or ASTM D874
Open-cup flash point, °C	200	205	210	210	GOST 4333 or ASTM D92
Pour point, °C	-40	- 35	- 30	-20	GOST 20287 Method B
Evaporating by NOACK, $\%$	15	15	15	15	ASTM D5800 or DIN 51581-1





AUTOEXPRESS SUPREME

Application

Premium oils are manufactured on a semi-synthetic basis with multifunctional additives. AUTOEXPRESS SUPREME oils are designed for lubrication of modern high-speed four-stroke heavy-duty diesel engines and can be used in highly accelerated heavy-duty petrol engines.

Indicator name	SAE 5W30 API SN/CF	SAE 5W40 API SN/CF	Testing methods
Kinematic viscosity at 100 °C, mm²/s	9,3-12,5	12,5-16,3	GOST 33 or ASTM D445
Viscosity index	140	140	GOST 25371 or ASTM D2270
Dynamic viscosity (CCS), mPa*s	6600 at -30 °C	7000 at -30 °C	GOST P 52559 or ASTM D5293
Dynamic viscosity (MRV), mPa-s	25 000 at -35 °C	30 000 at -35 °C	GOST P 52257 or ASTM D4684
TBN, mg KOH per 1 g oil	5,5	8	GOST 30050 or ASTM D2896
Sulphated ash content, %	1	1,3	GOST 12417 or ASTM D874
Open-cup flash point, °C	210	210	GOST 4333 or ASTM D92
Pour point, °C	-40	-35	GOST 20287 method B
Evaporating by NOACK, %	15	15	ASTM D5800 or DIN 51581-1







AUTOEXPRESS MISSION

Application

AUTOEXPRESS MISSION gear oils are designed for use in manual gearboxes of passenger cars and trucks as well as in other components and units of mobile transmissions, where GL-4 oils are recommended.

Gear oils according to SAE J 306 comply with viscosity grades SAE 75W-90, SAE 80W-90, SAE 85W-90; with regard to operational properties they correspond roughly to the requirements of category GL-4 (SAE 75W-90, 80W-90, 85W-90) according to API classification. In accordance with GOST 17479.2 gear oils are classified as TM-4 group.

Physical and chemical characteristics of GL-4 oil

Indicator name	AE MISSION TM-4, SAE 75W80, API GL-4	AE MISSION TM-4, SAE 75W85, API GL-4	AE MISSION TM-4 SAE 75W90, API GL-4	AE MISSION TM-4, SAE 80W85, API GL-4	AE MISSION TM-4, SAE 80W90, API GL-4	Testing methods
Kinematic viscosity at 100 °C, mm²/s	7-11	11-13,5	не менее 15	11-13,5	не менее 15	GOST 33 or ASTM D445
Dynamic viscosity mPa*s (sP): at -26 °C at -40 °C	_ 150 000	_ 150 000	_ 150 000	150 000 	150 000 	ASTM D9983 or GOST 1929 and n. 7.2 STO
Viscosity index	130	130	130	100	90	GOST 25371 or ASTM D2270
Open-cup flash point, °C	165	165	165	185	185	GOST 6356 or ASTM D92
Pour point, °C	-42	-42	-42	-30	-30	GOST 20287
Tendency to foaming, cm ³ : at 24 °C at 94 °C at 24 °C after testing at 94 °C	50 50 50	50 50 50	50 50 50	50 50 50	50 50 50	ASTM D892 or GOST 23652





AUTOEXPRESS HYDRAULIC POWER STEERING

Application

All-season mineral oil is designed for HPS systems and hydrostatic transmissions. It is produced based on deeply refined base oils and additives that improve antioxidant, anti-wear, detergent and anti-foam properties. Designed to meet modern requirements for hydraulic and automatic transmissions operation.

Indicator name	AUTOEXPRESS HYDRAULIC POWER _STEERING	Reference documentation
Kinematic viscosity, mm²/s at -20 °C at 40 °C	1300 17-22	GOST 33
Open-cup flash point, °C	163	GOST 4333
Pour point, °C	-45	GOST 20287 Method B
Mass fraction of water	none	GOST 2477





AUTOEXPRESS MOTO 2T

Application

AUTOEXPRESS MOTO 2T is a modern high quality mineral oil for use in two-stroke petrol engines of motorbikes, mopeds, scooters, snowmobiles etc. It has excellent detergent, antioxidant and antiwear properties.

The oil is manufactured on the basis of high quality base oil with a highly effective modern low ash additive package, which provides maximum engine protection in all operating conditions and significantly reduces the risk of fouling of the exhaust system, leads to reducing spark plug failures, reducing the risk of glow plug ignition, providing greater engine efficiency and lower fuel consumption. Due to its carefully balanced formulation, AUTOEXPRESS MOTO 2T is almost smokeless and as environmentally friendly as possible.

The mixing ratio must comply with the engine manual. The standard norm for API TC oils is a petrol to oil ratio of 50:1.

Indicator name	AUTOEXPRESS MOTO 2T	Reference documentation
Kinematic viscosity at 100 °C, mm²/s	14,5	GOST 33
Viscosity index	94	GOST 25371
Open-cup flash point, °C	212	GOST 4333
Pour point, °C	-20	GOST 20287 Method B
Mass fraction of water	none	GOST 2477
Sulphated ash content, %	0,19	GOST 12417











AUTOEXPRESS LINE OF AUTO CHEMICALS AND AUTO COSMETICS

AUTOEXPRESS line of auto chemicals and auto cosmetics has more than a hundred unique products. The high-performance products have been developed for all systems: fuel, oil and cooling systems for both petrol and diesel engines. Interior and exterior care formulations quickly and effectively clean, refresh and polish the parts to be treated.

The AUTOEXPRESS range is based on windscreen washer fluids guaranteed to perform in the stated temperature ranges, remaining effective even in extremely low temperatures. All fluids are made of high-quality isopropyl alcohol, have a pleasant smell and are absolutely harmless to vehicle lacquer coating.

Own production and laboratory facilities allow us to control the entire manufacturing and packaging process and ensure high quality in commercial batches of any volume.

The AUTOEXPRESS brand has proved itself to be successful amongst Russian automobile owners. It is available in major retail chains and petrol filling stations and is fully suitable for professional use. Every year the product range is improved in accordance with the market requirements formulations and the range of products is being extended.





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