



Изготовитель ООО "Черкасский завод автохимии", Украина, г.Черкассы,
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ПАСПОРТ КАЧЕСТВА № 23-5844/1

Жидкость охлаждающая низкотемпературная марки А-38 зеленый

Антифриз G11 VAMP

ТУ У 24.6-14215951-001:2010 с изменениями 1-6

Партия №: 26-020-01

Масса нетто, кг указано на канистре

Дата фасовки

Вид и тип тары

15.01.2026

кан п/е 1л, 5л, 10л

№	Название показателя	Норма	Факт	Метод испытания
1	Внешний вид	Однородная прозрачная жидкость без механических примесей. Цвет соответствует образцу -эталоны	Соответствует	ТУ У 24.6-14215951-001:2010 п.6,3
2	Плотность при температуре 20 °С, г/см ³ , не меньше	1.060	1.065	ДСТУ 7261:2012
3	Фракционный состав:			ТУ У 24.6-14215951-001:2010 п.6,6
	Температура начала перегонки, °С, не ниже	100	108	
	Фракционный состав массовая доля жидкости, перегоняемая до температуры °С, не больше	60	52	
4	Коррозионное воздействие на металлы г/м ² сут., не больше *			ТУ У 24.6-14215951-001:2010 п.6,7
	• алюминий	0.1	0.08	
	• чугун	0.1	0.07	
	• сталь	0.1	0.06	
	• медь	0.1	0.05	
	• латунь	0.1	0.06	
	• припой	0.2	0.12	
5	Вспениваемость:			ТУ У 24.6-14215951-001:2010 п.6,8
	• Объем пены, см ³ не больше	30	0	
	• Стойкость пены, с, не больше	3	0	
6	Набухание резины, %, не больше	5	0.9	ТУ У 24.6-14215951-001:2010 п.6,9
7	Водородный показатель(pH), при 20 °С	7.5 -11.0	8.6	ТУ У 24.6-14215951-001:2010 п.6,10
8	Щелочность, см ³ раствора КОН, не меньше	не нормується	6.3	ТУ У 24.6-14215951-001:2010 п.6,11
9	Температура застывания, °С, не выше	-39	-40	ТУ У 24.6-14215951-001:2010, п.6,13

*Согласно протокола периодических испытаний № 26-05 п.и от 16.01.2026

Гарантийный срок хранения – 5 лет

Вывод: соответствует требованиям ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Ответственный за анализ Суржикова Н. Л.

Подпись

Контроль качества упаковки

Подпись

Печать





Изготовитель ООО "Черкасский завод автохимии", Украина, г.Черкассы,
ул. В.Чорновола 118, тел. +38 (0472) 64-24-04, 64-04-90

ПАСПОРТ КАЧЕСТВА № 16-1834/2

**Жидкость охлаждающая
низкозамерзающая марки А-38 красный
Антифриз G12+
ТУ У 24.6-14215951-001:2010 зі змінами 1-6**

Партия №: 26-007-01
Масса нетто, кг указано на канистре

Дата фасовки
Вид и тип тары

08.01.2026
кан. п/е 1л, 5л, 10л

№	Название показателя	Норма	Факт	Метод испытания
1	Внешний вид	Однородная прозрачная жидкость без механических примесей. Цвет соответствует образцу-эталоноу	Соответствует	ГОСТ 28084-89, п.4.1
2	Плотность при температуре 20 °С, г/см ³ , не меньше	1.06	1.065	ГОСТ 18995.1-73, раздел 1
3	Фракционный состав:			ГОСТ 28084-89, п.4.4
	Точка кипения, °С, не ниже	108	108.0	
	Фракционный состав массовая доля жидкости, перегоняемая до температуры °С, не больше	60	52.0	
4	Коррозионное воздействие на металлы г/м ² сут., не больше *			ГОСТ 28084-89, п.4.5
	• алюминий	0.1	0.08	
	• чугун	0.1	0.07	
	• сталь	0.1	0.06	
	• медь	0.1	0.05	
	• латунь	0.1	0.06	
	• припой	0.2	0.12	
5	Вспениваемость:			ГОСТ 28084-89, п.4.6
	• Объем пены, см ³ не больше	30	0.00	
	• Стойкость пены, с, не больше	3	0.00	
6	Содержание золы, %, не более	2.5	0.00	ГОСТ 28084-89
7	Набухание резины, %, не больше	5	0.9	ГОСТ 28084-89, п.4.7
8	Водородный показатель(рН), при 20 °С	7.5-11.0	8.6	ГОСТ 28084-89, п.4.8
9	Щелочность, см ³ раствора КОН, не меньше	не нормируется	20.0	ГОСТ 28084-89, п.4.9
10	Температура застывания, °С, не выше	-39	-40.0	ТУ У 24.6-14215951-001:2010, п.6.13

***Согласно протокола периодических испытаний № 23-68 от 08.01.2026**

Гарантийный срок хранения – 5 лет

Вывод: соответствует требованиям ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Ответственный за анализ Суржикова Н. Л.

Подпись

Контроль качества упаковки Бабенкова Т.Т.

Подпись



Печать





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ул. В.Чорновола 118, тел. +38 (0472) 64-24-04, 64-04-90

ПАСПОРТ КАЧЕСТВА № 16-1835/1

Жидкость охлаждающая
низкозамерзающая марки А-40
Tosol

ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Партия №: 003-26
Масса нетто, кг указано на канистре

Дата фасовки
Вид и тип тары

05.01.2026
кан.п/е 1л, 5л, 10л

№	Название показателя	Норма	Факт	Метод испытания
1	Внешний вид	Однородная прозрачная жидкость без механических примесей. Цвет соответствует образцу-эталоноу	Соответствует	ГОСТ 28084-89, п.4.1
2	Плотность при температуре 20 °С, г/см ³ , не меньше	1.06	1.065	ГОСТ 18995.1-73, розділ 1
3	Фракционный состав:			ГОСТ 28084-89, п.4.4
	Температура начала перегонки, °С, не ниже	100	100.0	
	Фракционный состав массовая доля жидкости, перегоняемая до температуры °С, не больше	60	54.3	
4	Коррозионное воздействие на металлы г/м2 сут., не больше*			ГОСТ 28084-89, п.4.5
	• алюминий	0.1	0.04	
	• чугун	0.1	0.08	
	• сталь	0.1	0.03	
	• медь	0.1	0.04	
	• латунь	0.1	0.05	
	• припой	0.2	0.15	
5	Вспениваемость:			ГОСТ 28084-89, п.4.6
	• Объем пены, см3 не больше	30	15	
	• Стойкость пены, с, не больше	3	1.80	
6	Набухание резины, %, не больше	5	1.3	ГОСТ 28084-89, п.4.7
7	Водородный показатель(pH), при 20 °С	7.5-11.0	8.8	ГОСТ 28084-89, п.4.8
8	Щелочность, см3 раствора КОН, не меньше	10	21.3	ГОСТ 28084-89, п.4.9
9	Температура застывания, °С, не выше	-39	-40.0	ТУ У 24.6-14215951-001:2010, п.6.13

*Согласно протокола периодических испытаний № 18-019 от 20.01.2026

Гарантийный срок хранения – 5 лет

Вывод: соответствует требованиям ТУ У 24.6-14215951-001:2010 зі змінами 1-6

Ответственный за анализ Суржикова Н. Л.

Подпись

Контроль качества упаковки

Подпись



Печать





Safety Data Sheet
According to the Regulation (EC) №1907/2006
Brake fluid
DOT -4

Date: 03.11.2022	Version: 2.0	Supersedes version: -	Page 1 of 16
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1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

1.1 Product identifier	
Mixture name	Brake fluid DOT - 4
Trade name	Brake fluid DOT - 4
Identified uses	Brake fluid for all kind of trucks and passenger cars.
Uses advised against	Any other use.
Manufacturer	Cherkasy Autochemistry Plant LLC 18003, Ukraine, Cherkasy Vyacheslava Chornovola, 118, PO Box 729 tel/fax: +38 (0472) 64-61-60 e-mail: site@vamp.ua website: www.vamp.ua
1.4 Emergency telephone number	
112 (Please note that emergency numbers may vary depending upon the country of delivery though 112 remains valid as universal number)	

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture	
Classification according to Regulation (EC) No 1272/2008 (CLP)	Additional information
Acute toxicity, Category 4, oral; Specific Target Organ Toxicity (repeated exp.), Category 2; Affected organs: kidney Route of exposure: Oral	H302: Harmful if swallowed. H373: May cause damage to organs through prolonged or repeated exposure Full text of P- H- phrases see section 16
Human Health effects	
Inhalation	Slight irritation in the upper respiratory tract or bothersome effect;
Eyes	Slight irritation.
Skin	Slight irritation.
Swallowing	Dose-dependent absorptive effects. Nausea, stomachache, lethargy, drowsiness.
2.2 Label elements	



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Product identifier	1,2-Ethanediol (Index # 603-027-00-1); 2,2'-oxydiethanol (Index # 603-140-00-6).
Hazard pictograms	
Signal word	Warning
Hazard statements	H302: Harmful if swallowed. H373: May cause damage to organs through prolonged or repeated exposure
Precautionary statements	P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash with plenty of water and soap thoroughly after handling. P270 Do not eat, drink or smoke when using this product P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. rinse mouth. P314: Get medical advice/attention if you feel unwell. P501 Dispose of contents/ container in accordance with local regulations
Additional information	None
2.3 Other hazards	
The substances in mixture do not meet the criteria for PBT or vPvB according to Annex XIII of Regulation (EC) No.1907/2006 (REACH). Most of substances in mixture are combustible, difficult to ignite.	

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures (Hazardous ingredients and/or with relevant occupational exposure limits)

Chemical name	EC #	CAS #	Concentration, range %	Classification	Index #	Reach reg #
2,2'-oxydiethanol	203-872-2	111-46-6	≤90	Acute Toxicity, Cat. 4, Ingestion; H302	603-140-00-6-	01-2119457857-21



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				STOT – rep. exp. Cat. 2; H373		
1,2-Ethanediol	203-473-3	107-21-1	>10	Acute Toxicity, Cat. 4, Ingestion; H302 Stot.rep., Cat. 2; H373	603-027-00-1	01-2119456816-28
2-aminoethanol	205-483-3	141-43-5	0,02	Acute Tox. 4 H302, H312, H332 Skin corrosion Cat. 1B; H314 Serious Eye Damage Cat 1; H318 Hazardous to the Aquatic Env. Chronic Cat. 3; H412 STOT SE 3; H335: C ≥ 5 %	603-030-00-8	-

The mixture does not contain other additives in quantities that could affect product's labelling and classification according to CLP.

4. FIRST AID MEASURES

4.1 Description of first aid measures	
In case of inhalation:	Inhalation of product is not expected. Keep patient calm, remove to fresh air, seek medical attention.
In case of eye contact:	Wash affected eyes for at least 15 minutes under running water with eyelids held open. Consult ophthalmologist if irritation persists.
In case of skin contact:	Wash affected area thoroughly with soap and water.
In case of ingestion:	Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.
4.2 Most important symptoms and effects, both acute and delayed	
In case of inhalation	Headache, dizziness, weakness. Due to the low vapor pressure under normal conditions, exposure to vapors is only toxicologically relevant when handling heated mixture.
In case of eye contact	slightly irritating effect on mucous membranes.



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In case of skin contact	Slight irritation, redness, edema.
In case of ingestion	Headache, dizziness, weakness, vomiting, nausea, diarrhea, in case of severe poisoning: fainting, convulsions, damage to the kidneys.
Information to physician and first aider.	The risk of life-threatening poisoning should generally only exist after ingestion or very massive inhalation of aerosols. Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote
First aid arsenal	Universal medical kit with a set of drugs (in consultation with the medical department of the enterprise).
4.3 Indication of any immediate medical attention and special treatment needed	
Immediate medical attention is not usually expected.	

5. FIREFIGHTING MEASURES

5.1 Extinguishing media	
Suitable extinguishing media	Water spray, dry powder, alcohol-resistant foam, carbon dioxide
Unsuitable extinguishing media	Do not use direct water jets as water destroys the foam.
5.2 Special hazards arising from the substance or mixture	
Hazardous combustion products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and carbon dioxide and minor amounts of nitrous oxides.
5.3 Advice for firefighters	
Combustible product, ignites from open flame. Cool containers with water from distance. Wear full fire-resistant protective clothing and self-contained breathing apparatus with a full face-piece operated in positive pressure mode for confined or poorly ventilated spaces	
Further information: The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.	

6. ACCIDENTAL RELEASE MEASURES.

6.1. Personal precautions, protective equipment and emergency procedures	
6.1.1. For non-emergency personnel	Avoid contact with skin and eyes. Use personal protective clothing. Stop or contain leak at the source if safe to do so. Avoid direct contact with released



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	<p>material. Stay upwind. Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares).</p>
6.1.2. For emergency responders	<p>Body suit of chemically resistant and antistatic material. Work gloves providing adequate chemical resistance. Work helmet. Antistatic non-skid safety shoes or boots. Goggles if contact with eyes is possible. A half or full-face respirator with combined dust/organic vapor filter(s), or a Self-Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and fire presence. If release is accompanied with fire – see Section 5.3</p>
6.2 Environmental precautions	
<p>Do not empty into drains. Do not discharge into the subsoil/soil. Prevent product from entering soil, sewers, rivers, waterways or other bodies of water. Spills should be shielded with an earthen rampart.</p>	
6.3 Methods and material for containment and cleaning up	
<p>For large amounts: Pump off product. Dike the product and other contaminated materials to suitable corrosion resistant containers for recycle, recovery or safe disposal. The product can be absorbed with non-combustible materials e.g. sand and then collected. Flush the spill area with water. In case soil contamination in big quantities report to local authorities. For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).</p>	
6.4 Reference to other section	
<p>Information about personal precautions - see Section 8. Information about waste disposal - see Section 13.</p>	

7. HANDLING AND STORAGE

7.1 Precautions for safe handling	
General precautions for safe handling	<p>Use in well ventilated areas. Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing fumes or vapors.</p>
Fire preventions	<p>No smoking at working area. Take precautionary measures against static discharges.</p>



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	Take precautionary measures against static electricity such as ensuring all equipment is electrically grounded. Electrical devices must meet the specified temperature class. Temperature class: T2 (Auto ignition temperature >300 °C).
Aerosol and dust generation preventions	Avoid spraying and mist formation if used with equipment under pressure.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face and remove contaminated clothing and protective equipment before entering eating areas.
Environmental precautions	Do not allow product to enter into surface water or drains.
7.2 Conditions for safe storage, including any incompatibilities	
Technical measures and storage conditions	Store indoors in a cool, dry, well-ventilated area, away from incompatible materials and heat at ambient temperature. Storage temperature: < 40 °C The stated storage temperature should be noted.
Packaging	aluminum, Stainless steel, High density polyethylene (HDPE), light-impervious
Incompatible materials	Oxidizing agents, strong bases and acids.
Requirements for storage rooms and vessels	Provide general ventilation. Protect from atmospheric humidity. Protect contents from the effects of light.
Need for use of stabilizers or antioxidants	No
7.3 Specific end use(s)	
None.	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters					
Occupational exposure limits					
Limit value type (country of origin)	Substance name	CAS-No.	Monitoring procedures	Occupational exposure limit value	
				Long term mg/m ³	Short term mg/m ³



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EU (OEL)	2-aminoethanol	141-43-5	Area Air Sampling	2,5	7,6
EU (OEL)	1,2-Ethanediol	107-21-1	-	LTEL TWA =52	STEL =104
Germany (DFG)	2,2'-oxydiethanol	111-46-6	-	LTEL TWA=44	STEL =176
DNEL/DMEL values:					
Substance name	Worker	Consumer	Exposure route	Exposure frequency	Remark
2-aminoethanol	DNEL = 1 mg/m ³	DNEL = 0.18 mg/m ³	inhalation	Long term	-
	DNEL = 3 mg/kg bw/day	DNEL = 1.5 mg/kg bw/day	dermal	Long term	-
	-	DNEL = 1.5 mg/kg bw/day	oral	Long term	-
1,2-Ethanediol	DNEL=35 mg/m ³	7 mg/m ³	inhalation	Long-term	-
	106 mg/kg bw/day	53 mg/kg bw/day	dermal	Long-term	-
	No hazard identified	No hazard identified	Eye	-	local effects
2,2'-oxydiethanol	43 mg/kg bw/day	21 mg/kg bw/day	dermal	Long term	Systemic effect
	44 mg/m ³	12 mg/m ³	inhalation	Long-term	systemic effects
	60 mg/m ³	12 mg/m ³	inhalation	Long-term	local effects
PNEC values:					
Substance name	Environmental compartment	Value		Assessment factor	Remark
2-aminoethanol	aqua (freshwater)	PNEC = 0.07 mg/L		10	-
	aqua (marine water)	PNEC = 0.007 mg/L		100	-
	sediment (freshwater)	PNEC = 0.357 mg/kg sediment dw		-	-
	sediment (marine water)	PNEC = 0.036 mg/kg sediment dw		-	-
1,2-Ethanediol	aqua (freshwater)	PNEC 10 mg/L		-	



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	PNEC aqua (marine water)	PNEC 1 mg/L	-
	PNEC aqua (intermittent, freshwater)	PNEC 10 mg/L	-
2,2'-oxydiethanol	freshwater	PNEC 10 mg/L	-
	aqua (marine water)	PNEC 1 mg/L	-
	Sediment (freshwater) dw	PNEC = 20.9 mg/kg	-

8.2 Exposure controls

Occupational exposure controls

8.2.1. Appropriate engineering controls

Appropriate general ventilation should be sufficient.

8.2.2. Individual protection measures, such as personal protective equipment

Respiratory protection	Not needed during foreseen use. If fumes or mists are formed due to accident use respirator. Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapors of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)
Eye/face protection	If potential exists for splashing or mist formation, use tightly fitting safety goggles (e.g. EN 166)
Skin/body protection	Wear working protective gloves (EN 374). Wear regular work clothing.

8.2.3. Environmental exposure controls

Measures to prevent exposure	Emissions from wastewaters from work processes should be checked to ensure they comply with the requirements of environmental protection legislation.
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9. PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties

Physical state	Oily liquid
Colour	Light yellow
Odour	Almost odorless



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Melting point/freezing point (°C)	- 35
Initial boiling point/range (°C)	230 244 (2,2'-oxydiethanol) , 197°C (1,2-ethandiol)
Flammability	nonflammable (GHS classification criteria for flammable liquids: no category (nonflammable) Flash point >93 °C)
Lower and upper explosion limit	Non explosive <u>2,2'-oxydiethanol</u> : Lower explosion limit: 1.7% by volume 75 g/m ³ Upper explosion limit:37% by volume 1635 g/m ³ <u>1,2- ethandiol</u> : Lower explosion limit: 3.2% by volume 80 g/m ³ Upper explosion limit: 43 - 51%(by vol. 1090 ... 1326 g/m ³ Lower explosion point: 109°C
Flash point (°C)	120°C 138 °C (2,2-oxydiethanol) 111°C (1,2- ethandiol) 91°C – closed cup (2-aminoethanol)
Auto-ignition temperature (°C)	No data available for mixture 372 °C (2,2-oxydiethanol) 410°C (1,2-(Ethandiol) 424 (2-aminoethanol)
Decomposition temperature (°C)	No data available for mixture.
pH	pH value 7,0 -11,5
Kinematic viscosity (cSt = mm²/c) at minus (30±1) °C	< 1800
Solubility	Miscible with water.
Partition coefficient n-Octanol/Water (log Po/w)	Does not apply to mixtures.
Vapour pressure (kPa)	No data available for mixture. 0.008hPa(2,2-oxydiethanol) 0.123 hPa at 25 °C(1,2- ethandiol)
Density and/or relative density	1,06
Relative vapour density	No data available for mixture
Particle characteristics	Not applicable
9.2 Other information	
9.2.1. Information with regard to physical hazard classes	None



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9.2.2. Other safety characteristics	None
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10. STABILITY AND REACTIVITY

10.1 Reactivity	The substance can react dangerously with strong oxidizing agents
10.2 Chemical stability	The product is stable upon appropriate handling and storage conditions.
10.3 Possibility of hazardous reactions	oxidation in flame or excessive heat. Risk of explosion in contact with: perchloric acid
10.4 Conditions to avoid	Avoid heat, open flames, incompatible materials.
10.5 Incompatible materials	Oxidizing agents, bases and acids.
10.6 Hazardous decomposition products	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and carbon dioxide and minor amounts of nitrous oxides.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects.					
Toxicokinetics, metabolism and distribution					
<p>The main intake route for mixture at the workplace is via the respiratory tract. Due to the very low vapor pressure of the liquid under normal conditions, exposure to vapors is to be expected mainly on heating.</p> <p>The kidneys are considered to be a critical target organ of mixture components, even after repeated exposure. Cases of poisoning in humans show that easily acutely toxic doses can be absorbed in this way.</p>					
Acute toxicity		The mixture is classified as Acute toxicity, Category 4, oral; respectively classified substances are present in it. Data on substances is presented below.			
Substance name	Exposure route	Value	Exposure time period	Species	Method (as is, equivalent or similar)
2,2-oxydiethanol	oral	LD50 = 19600 mg/kg bw	-	rat	-
	dermal	LD50 = 13300 mg/kg bw	-	Rabbits	-
1,2-ethandiol	oral	LD50 = 4700mg/kg	-	rat	-



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Brake fluid
DOT -4

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	dermal	LD50 = 10600 mg/kg	-	Rabbits	-
2-aminoethanol	oral	LD50 = 1089 mg/kg	single dose	rat	OECD Guideline 401
	inhalation	LC50 = 1300 mg/m ³	6 hours	rat	national standard method with acceptable restrictions
	dermal	LD50 = 2504 mg/kg	24 hours	rabbit	OECD Guideline 402
Skin corrosion/irritation		The mixture is not classified as skin corrosive or irritating. Data on substances presented below.			
Substance name	Relevance	Result	Species	Method (as is, equivalent or similar)	
2,2-oxydiethanol	No	After a single dermal application of 50 mg DEG/kg body weight to the skin about 10% of the dose was absorbed within 72 hours. In the case of impact on injured skin, higher exposures must be expected.	rats	-	
2-aminoethanol	Yes	Erythema score 3 not reversible Classified as Skin corr. 1B	rabbit	OECD Guideline 404	
Serious eye damage/irritation		The mixture is not classified as Serious eye damage/irritation as it contains the lowest concentration of the classified substance. Data on substance presented below			
Substance name	Relevance	Result	Species	Method (as is, equivalent or similar)	
2-aminoethanol	Yes	Irreversible effects on the eye Classified as Eye. Dam. 1.	Rabbit	OECD Guideline 405	
Respiratory or skin sensitization	The mixture is not classified as sensitizing as no respectively classified substances are present in it.				
Germ cell mutagenicity	The mixture is not classified as no respectively classified substances are present in it.				
Carcinogenicity	The mixture is not classified as carcinogen as no respectively classified substances are present in it. 2,2'-oxydiethanol NOAEL (carcinog.), oral, rat=1160 mg/kg bw/day				
Reproductive toxicity	The mixture is not classified as possessing reproductive toxicity as no respectively classified substances are present in it.				



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Data on substances presented below.				
Substance name	Relevance	Result	Species	Method (as is, equivalent or similar)
2-aminoethanol	Yes	NOAEL = 1 000 mg/kg bw/day	rat	OECD Guideline 415
2,2'-oxydiethanol		NOAEL (effects on fertility), subacute, 3060mg/kg bw/day	oral, mouse	-
specific target organ toxicity — single exposure	The mixture is not classified for specific target organ toxicity — single exposure as no respectively classified substances are present in it.			
STOT-repeated exposure	The mixture is classified as STOT-repeated exposure, Category 2, oral (Affected organs: kidney Route of exposure: Oral;) respectively classified substances are present in it. Data on substances is presented below.			
Substance name	Exposure route	Result	Species	Method (as is, equivalent or similar)
2,2-oxydiethanol	oral	NOAEL = 300 mg/kg bw/day(98 days)	rats	System: urinary. Organ: kidney
2-aminoethanol	oral	NOAEL = 300 mg/kg bw/day 75 days	rat	
1,2-ethandiol	oral	NOAEL =150 mg/kg bw/day The kidneys were found to be the target organ at higher doses	rat	equivalent or similar to OECD Guideline 452
Aspiration hazard	The mixture is not classified for aspiration toxicity as no respectively classified substances are present in it.			
Adverse health effects and symptoms associated with exposure				
In case of inhalation	due to high concentrations of vapors/aerosol, slight irritation in the upper respiratory tract or bothersome effect; in extreme cases breathing difficulties and absorptive effects			
In case of eye contact	no or little irritation			
In case of skin contact	no significant irritation; systemic effects must be expected if there is extensive contact with damaged skin.			
In case of ingestion	hardly any irritation, dose-dependent absorptive effects.			



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11.2 Information on other hazards	
Endocrine disrupting properties	Any of the ingredient of mixture has not been identified as having endocrine disrupting properties.

12. ECOLOGICAL INFORMATION

12.1 Toxicity:					
Due to all available data on environmental fate and aquatic toxicology the substance does not need to be classified according to EU GHS CLP. Data on substances presented below.					
Chemical name	Aquatic toxicity	Effect dose	Exposure time	Species	Method
diethylene glycol	Short-term toxicity to fish	LC50=75200 mg/L	96h	Fathead minnow (Pimephales promelas)	a flow-through study
	Long-term toxicity to fish	(ChV)7694 mg/L	30d	fish	QSAR EpiWin-Program ECOSAR v1.11
ethyleneglycol	Short-term toxicity to fish	LC50>72860 mg/L	96 h	Pimephales promelas	EPA 600/4-90/027
	Short-term toxicity to fish	LC50 =41000 mg/l	48 h	Crustaceans	-
2-aminoethanol	Acute toxicity to fish	LC50 = 280 mg/L	96 hours	Cyprinus carpio	Directive 92/69/EEC, C.1.
	Long-term toxicity to fish	NOEC = 1.24 mg/L	41 days	Oryzias latipes	OECD Guideline 210
	Acute toxicity to aquatic invertebrates	EC50 = 27.04 mg/L	48 hours	Daphnia magna	OECD Guideline 202
	Long-term toxicity to aquatic invertebrates	NOEC = 0.85 mg/L	21 day	Daphnia magna	OECD Guideline 202
	Toxicity to aquatic algae and cyanobacteria	NOEC = 1 mg/L	72 hours	Pseudokirchneriella subcapitata	OECD Guideline 201
	Toxicity to microorganisms	EC10 > 1 000 mg/L	30 min.	activated sludge	OECD Guideline 209
12.2 Persistence and degradability					
Abiotic Degradation					
No data available for mixture.					
Biodegradation					
Readily biodegradable (according to OECD criteria).					



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1,2-ethandiol: After 10 days > 90 % degradation was determined. (OECD 301A) 2,2-oxydiethanol: meet the criteria in a carbon dioxide evolution test according to OECD 301B. % Degradation of test substance: 90 – 100% after 28d
12.3 Bioaccumulative potential
No data available for mixture .
12.4 Mobility in soil
Study scientifically unjustified (substance is readily biodegradable)
12.5 Results of PBT and vPvB assessment
The substances in mixture do not meet the criteria for PBT or vPvB.
12.6 Other adverse effects:
None

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods	
Appropriate disposal / Product	Waste disposal should be in strict correspondence with local and national laws and regulations. Waste of the product is not regarded as hazardous according to Directive 2008/98/EC.
Waste codes according to EWC	none
Appropriate disposal /Packaging	Contaminated stainless steel empty containers should be properly cleaned and reused. Contaminated PE containers should be disposed as product or municipal waste.

14. TRANSPORT INFORMATION

The product is transported by railway (RID) and road (ADR) and waterways (ADN) Not subject to transport regulations.	
14.1 UN number	None
14.2 UN proper shipping name	None
14.3 Transport hazard class(es)	None
14.4. Packing group	None
14.5. Environmental hazards	Not considered as marine pollutant according to IMDG Code.
14.6. Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	This product is not transported in bulk and is out of the scope of Annex II of MARPOL 73/78.

15. REGULATORY INFORMATION



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15.1 Safety, health and environmental regulations/legislation specific for the substance

None

15.2 Chemical Safety Assessment

Chemical safety assessment has not been carried for the mixture.

16. OTHER INFORMATION

Revision

SDS has been issued for the first time.

Abbreviations

OEL – occupational exposure limit
VLEP – valeurs limites d'exposition professionnelle- occupational exposure limit values
VLE - valeurs limites d'exposition- occupational exposure limit values
MAK - maximum workplace concentrations
MAC - maximum workplace concentrations
WEL- Workplace Exposure Limits
AK - Permissible average concentration
DNEL - derived no-effect level
PNEC - predicted no effect concentration
LD50 – lethal dose
EC50 – half maximal effective concentration
EC10 - half maximal effective concentration
NOEL - no observed effect level
NOEC - no observed effect concentration
NOAEL – no observed adverse effect level
PBT or vPvB - persistent, bioaccumulative and toxic or very persistent very bioaccumulative
STOT SE – Specific target organ toxicity – single exposure
STOT RE - Specific target organ toxicity – repeated exposure
AF – Assessment factor

Sources for data

Suppliers' SDS for 1.2-ethandiol
Suppliers' SDS for 2.2'- oxydiethanol
ECHA database on registered substances
GESTIS database on international limit values
Specification TU U 20.5-37439067-006:2019

Classification method

For the purpose of classification of mixture available data on all substances and additivity principle was used. For the purpose of not classification of mixture for flammable liquids class results of flash point tests for mixture components was used.

List of hazard statements and/or precautionary statements

H302: Harmful if swallowed.



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<p>H373: May cause damage to organs through prolonged or repeated exposure P260: Do not breathe dust/fume/gas/mist/vapors/spray. P264 Wash with plenty of water and soap thoroughly after handling. P270 Do not eat, drink or smoke when using this product P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. rinse mouth. P314: Get medical advice/attention if you feel unwell. P501 Dispose of contents/ container in accordance with local regulations All H- P-statements are mentioned in full in Section 2 of the SDS.</p>
<p>Advice on training</p> <p>Read carefully the SDS before using the product. Train personnel in the safe use of this product.</p>
<p>The information contained in this SDS is based on current knowledge and experience and describes the product only with regard to the safety of the product. The product must not be used for purposes other than those specified in section 1. The consumer is solely responsible for compliance with all applicable local laws and regulations. This information is not a guarantee of product quality. This information may be subject to revision as new knowledge and experience becomes available. Present SDS must be replaced with a new one if any changes will be made in the composition of the product.</p>

AVIZ SANITAR
PENTRU PRODUSELE ALIMENTARE ȘI NEALIMENTARE Nr. P-17027/2023
Санитарное заключение для пищевых и непищевых продуктов
din/от 14 aprilie 2023

Prin prezentul aviz sanitar se confirmă că producerea, importul, utilizarea și desfacerea produselor / echipamentelor
Настоящим санитарным заключением подтверждается что производство, ввоз, использование и реализация продукции / оборудования
Soluție de spălat parbriz "IARNA" -20 C, -30 C; Soluție de spălat parbriz "VARA", lichid pentru aprinderea focului

sunt conforme Regulamentului (lor) sanitar (e) / соответствуют санитарному (ым) регламенту (ам) (se va indica denumirea completă a
Regulamentului (lor) sanitar (e) / указать полное наименование санитарного (ых) регламента (ов))
SF 41279445-001:2020, IT MD 41279445-001:2020, SM GOST R 51696:2003 Produse chimice de uz casnic

Organizația-producătoare/importatoare, țara de origine / организация произв./импортер, страна происхождения

"AMID-AUTO" SRL, Republica Moldova

Destinatarul avizului sanitar / получатель санитарного заключения

AMID-AUTO S.R.L. , Republica Moldova, mun. Chișinău, sec. Botanica, str. Independenței, 42, ap./of. 20

Temei pentru recunoașterea conformității produselor Regulamentului (lor) sanitar (e) menționat (e) a servit /

Основанием для признания продукции указанному (ым) санитарному (ым) регламенту (ам) послужило

Demers, autorizație sanitară de funcționare, standard de firmă, instrucțiune tehnologică, rețeta, raport de încercări nr.69 din
17.05.2022, rapoarte a încercărilor de laborator nr.51007043-51007046 din 06.04.2023, din 11.04.2023
(a enumera documentele de însoțire, buletinele de analiză / перечислить сопроводительные док., протоколы исслед.)

Caracteristica sanitară a produselor / санитарная характеристика продукции:

Parametrii (factorii) / показатели (факторы)

Normativul sanitar / санитарный норматив

conform rapoartelor încercărilor de laborator nr.51007043-51007046 din 06.04.2023, din 11.04.2023

Domeniu de utilizare / Область применения:

întreținere auto

Condițiile necesare de utilizare, depozitare, transportare, măsurile de securitate / Необходимые условия использования, хранения,
транспортировки, меры безопасности:

producerea, plasarea pe piață în condițiile respectării legislației în vigoare în Republica Moldova

AVIZUL SANITAR este valabil pînă la / Санитарное заключение действительно до: 30.04.2026

DIRECTORUL AGENȚIEI NAȚIONALE PENTRU SĂNĂTATE PUBLICĂ

Digitally signed by Jelamschi Nicolae

Date: 2023.04.14 11:46:18 EEST

Reason: MoldSign Signature

Location: Moldova

Nicolae Jelamschi





Ultron EP2

SPECIFICATIONS

NLGI:	2
ISO:	L-XCEHB 2 / LB/GC
DIN:	KP2P-30

APPROVALS AND CONFORMITY

LB/GC

CHARACTERISTICS

- provides excellent protection against wear under heavy loads (shock, vibration, sharp braking, etc.) and speeds, effective lubrication and seal at a high temperatures;
- high resistance to corrosion and water washout, mechanical and chemical stability in aggressive environments;
- extended service intervals even under difficult conditions, the savings due to reducing downtime and service costs. Minimize the range of used greases and stock.

TYPICALS

Viscosity of Oil at 40 °C, mm ² /s	221
Penetration at 25°C, 10-1-mm	285
Dropping point, °C	270
Anti-corrosion properties, -	pass
Weld Load 4-Ball, kg	335
Colour, -	blue

DESCRIPTION

Wolver ULTRON EP2 – synthetic grease with high anti-wear and extreme pressure properties (Extra Pressure). It has maximum flexibility.

Wolver ULTRON EP2 – based on lithium complex, used for industry and transport – where the general-purpose grease is not allowed to use because of extreme loads, temperatures or aggressive environment or an extended service intervals required.

Operating Temperature Range: -30 °C ... + 160 °C.

Application

- Wheel bearings, cardan shafts, hinges, ball joints, fifth wheel couplings, bushings, pins, and chassis of cars and trucks, as well as agricultural equipment and heavy vehicles;
- Equipment for mining, metallurgy, building industry, paper and sugar mills under high temperature and wet conditions;
- Mechanisms of sea and river vessels – main, auxiliary and deck, working in any climatic zone;
- Ventilator bearings, motors and generators with extended service intervals;
- Pump bearings, bearings for industrial and domestic laundry and washing machines.

MATERIAL SAFETY DATA SHEET

Regulation(EC) No 1907/2006(REACH), Annex II

(COMMISSION REGULATION(EU) NO 453/2010)

Version 1

Issue Date 29 Dec 2023

Production Name antirust lubricant

Revision date 29 Dec 2023

Section 1-Chemical product and company identification

Trade name: Antirust lubricant

Size: 100ml-450ml

Effective Date: 2023 12 18

MSDS#: 2020748858

Information department: Technology Department

Emergency information: TEL 86-20-82833999 if located outside of China

Section 2 - Composition / Information on Ingredients

ITME	Ingredient Name	CAS Number	% weight
01	Refined white oil	8012-95-1	10%
02	Petroleum sulfonate	61789-85-3	5%
03	Pentaerythritol oleate	19321-40-5	15%
04	Propane	74-98-6	35%
05	Butane	106-97-8	35%

Section 3 - Hazards Identification

3.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

flammable aerosols Category 1 -(H222)

Germ cell mutagenicity Category 1B -(H340)

Carcinogenicity Category 1B -(H350)

Reproductive Toxicity Category 2 -(H361)

Aspiration toxicity Category 1 -(H304)

Classification according to Directive 67/548/EEC or 1999/45/EC

Xn -Harmful

F+ -Extremely flammable

F+; R12

Carcinogenic, Category 1; R45

Mutagenic Category 2; R46

Xn; R65

Toxic for reproduction Category 3; R63mouth, throat and stomach.

3.2 Label elements Symbols/Pictograms



Signal word

Danger

Hazard Statements

H222 -Extremely flammable aerosol
 H304 -May be fatal if swallowed and enters airways
 H340 -May cause genetic defects
 H350 -May cause cancer
 H361 -Suspected of damaging fertility or the unborn child
 P264 -Wash face, hands and any exposed skin thoroughly after handling
 P273 -Avoid release to the environment
 P301 + P310 -IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
 P331 -Do NOT induce vomiting
 P405 -Store locked up
 P501 -Dispose of contents/ container to an approved waste disposal plant
 P210 -Keep away from heat/sparks/open flames/hot surfaces. -No smoking
 P211 -Do not spray on an open flame or other ignition source
 P251 -Pressurized container: Do not pierce or burn, even after use
 P410 + P412 -Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 ° F

3.3 Other hazards

No information available

Section 4 - First aid measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

FIRST AID - SKIN CONTACT: Immediately flush skin with plenty of water. Remove clothing. Get medical attention immediately. Wash clothing separately before reuse.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: Get medical attention immediately. If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Section 5 - Fire-Fighting Measures

Extinguishing Media: Dry chemical, foam, carbon dioxide., sand . Water jets are not suitable for fire fighting.

General Fire Hazards: Flammable liquid. Do not spray near sources of ignition such as open flames, sparks, hot surfaces or burning cigarettes. Aerosol cans may explode if heated above 54 degrees Celsius.

Fire-Fighting Equipment/Instructions: Wear self-contained breathing apparatus. If possible remove aerosol containers from the vicinity of the fire. Otherwise keep containers as cool as possible by spraying with water from a protected position.

Section 6 - Accidental Release Measures

Containment Procedures: Contain the discharge material. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Clean-Up Procedures: Attempt to reclaim the free product, if this is possible. If molten product spilled, solidify and recover.

Evacuation Procedures: Isolate area. Keep unnecessary personnel away.

Special Instructions: Avoid inhalation of fumes from molten product. Avoid skin contact with molten resins. Wear appropriate protective equipment and clothing during clean-up. Do not allow the spilled product to enter public drainage systems or open water courses.

Section 7 - Handling and Storage

Procedures for Handling: Avoid breathing fumes if this product is used at high temperatures. Keep away from potential sources of ignition. Wash hands after handling and before eating.

Recommended Storage Methods: Keep the container tightly closed and in a cool, well-ventilated place. Store away from strong oxidizers. Do not store this material in open and unlabeled containers.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines:

A. General Product Information - If oil mists are generated, observe the OSHA exposure limit of 5 mg/m³.

B. Component Exposure Limits - No ACGIH, NIOSH or OSHA exposure guidelines listed for the product's components.

Engineering Controls: Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces.

Eye / Face Protection: Wear safety goggles or faceshield when working with melted material.

Skin Protection: Chemically resistant gloves with thermal protection when working with melted paraffin.

Respiratory Protection: Under normal conditions, respirator is not normally required.

General: Use good industrial hygiene practices.

Section 9 - Physical and Chemical Properties

Physical State: liquid

Appearance: transparent

Odor: Not available

Odor Threshold: Not available

Vapor Pressure: Compressed gas

Vapor Density:(water=1):0.8

Flash Point:N/A

Boiling Point: >35°C

Melting Point: <0°C

% Volatile :40-60

Evaporation Rate: slow

pH: N/A

Section 10 - Stability and Reactivity

Chemical Stability: Stable

Hazardous Polymerization: Hazard polymerization will not occur.

Chemical Incompatibilities: Strong oxidizing agents, strong acids and strong base

Conditions to Avoid (Stability): Avoid excessive heat and all sources of ignition.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.

Section 11- Toxicological Information

Acute Toxicity / Target Organ Information:

A. General Product / Component Information - This material is typically inert. Paraffin fumes are a result of overheating product. Fumes are known to be mildly irritating to the nose, throat, and eyes.

B. Component LD50 / LC50 - No data available for product.

Epidemiology: No data available for product.

Carcinogenicity:

A. General Product / Component Information - Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

B. Component Carcinogenicity Listings - None of this product's components are listed by ACGIH, IARC, NIOSH, NTP or OSHA.

Teratogenicity / Reproductive Effects: No data available for the product as a whole.

Neurotoxicity: No data available for the product as a whole.

Mutagenicity: No data available on this product as a whole.

Other Information: No other information available.

Section 12 - Ecological Information

Ecotoxicity: No information is available on ecotoxicity of this product. Keep product out of sewers and waterways.

Environmental Fate: No information is available.

Section 13 - Disposal Considerations

U.S. EPA Waste Number & Descriptions:

A. General Product Information - Product as shipped does not meet the definition or characteristics of a hazardous waste.

B. Component Waste Numbers - No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Incinerate the material under controlled conditions in an approved incinerator.

Section 14 - Transport Information

Proper Shipping Name: Aerosol

Hazard Class: 2.1

Identification number: N/A

ADR/RID class: 2.1
IMDG Class:IMO 2.1
ICAO/IATA Class: 2.1
Packing Group: II
EMS Number: F-D S-D S-U
MFAG: F-D S-D S-U
UN-Number: 1950

Section 15 - Regulatory Information

U.S. Federal Regulatory Information:

- A. General Product Information - All components of this product are listed on the U.S. EPA TSCA Inventory.
- B. Component Information - None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4).

State Regulations:

- A. General Product Information - No components require labeling under California Proposition 65.
- B. Component Information - None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Other Regulations:

- A. General Product Information - All known (non-proprietary) components of this product are listed on the EINECS inventory of existing chemicals.
- B. Component Information - None of this product's components are listed on the Canadian Controlled Product Ingredient Disclosure List.

Section 16 - Other Information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Veslee be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Veslee has been advised of the possibility of such damages

ТОВ «СП ЮКОЙЛ». Завод технічних олів.
 Україна, 09100, Київська обл., Білоцерківський р-н, місто Біла Церква, вул.Пулюя Івана, будинок 48-А
 Телефон приймальні: +38 (0612) 65 46 81
 Телефон ВТК: +38 (061) 222 80 25
 ЄДРПОУ 31852954



Випробувальна лабораторія ТОВ «СП ЮКОЙЛ» атестована на проведення вимірювань показників якості нафтопродуктів, технічних рідин та мастильних матеріалів. Свідоцтво про визнання технічної компетентності № АВ 43-22 від 22.11.2022р. видане ДП «ЗАПОРІЖЖЯСТАНДАРТМЕТРОЛОГІЯ», чинне до 16.11.2024 р

Паспорт якості фасованої продукції №13086.05.01.1

Мастило YUKO Літол-24

ТУ У 20.5-31852954-122:2023

Виробник: ТОВ «СП ЮКОЙЛ»
 Розфасовано: ТОВ «СП ЮКОЙЛ» за ТУ У 23.2-31852954-027:2006
 Клас NLGI **NLGI 3**
 Клас експлуатаційних властивостей: **K3K-40, ISO-L-XDCEA3**

Дата виготовлення: Березень 2024р.
 Тара: відро 20л жерсть
 Номер партії: 13086.29.03.24.02.

Ф.5 СТП014

Назва показника	Вимоги НД	Фактично	Метод випробувань
Зовнішній вигляд	Однорідна мазь гладкої структури від світло-жовтого до темно-коричневого кольору	Однорідна мазь гладкої структури жовтого кольору	ГСТУ 38.001 або п. 7.3 цих ТУ
Температура крапання, °С, не нижче	140	148	ГОСТ 6793 або ASTM D2265
Пенетрація при 25°С з перемішуванням, 0,1 мм	230-290	240	ГОСТ 5346, метод Б або ASTM D217
В'язкість ефективна при мінус 20°С та середньому градієнті швидкості деформації 10 с-1, Па·с, не більше	1 500	680	ГОСТ 7163 або ASTM D1092
Колоїдна стабільність: масова частка оливи, відпресованої від мастила, %, не більше	15,0	5,60	ГОСТ 7142
Межа міцності на зсув при 50°С, Па, не менше	150	266	ГОСТ 7143 метод Б
Випарність, %, не більше	5,0	0,48	ГОСТ 9566 з доп. за п. 7.4 цих ТУ
Корозійний вплив на пластині зі сталі	Витримує	Витримує	ГОСТ 9.080
Трибологічні характеристики на чотирикульковій машині при температурі (20 ± 5) °С:			ГОСТ 9490 або ASTM D2596
- навантаження зварювання (Рзв), Н, не менше	1 381	1 381	

Паспорт якості дійсний тільки за наявності печатки.

Висновок: якість продукції відповідає вимогам ТУ У 20.5-31852954-122:2023 і ТУ У 23.2-31852954-027:2006

Гарантійний термін зберігання - 5 років
 М. П.

Начальник ВТК



Анна ЛАРЧЕНКО

WEB: www.yuko.eu
 Hot-line: +38 (0) 800 60 5555

E-mail: support@yukoil.com
 Tel.: +38 (061) 222 80 32

Member of:



Company: ALCO LLC
 3, Vali Mammadov st., Sabail dist.
 AZ1095, Baku, Azerbaijan

Certificate No.: 20251830
Date of issue: 10/09/2025

Test sample

Product: AVTOIL TRANSGUARD 80W-90 GL-5
Batch number: 25091830
Tank ID: T41.2

Manufacture date: 10/09/2025
Date of sampling: 10/09/2025
Date of analysis: 10/09/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	ASTM D445	13.5-22.0	16.03
Viscosity index	-	ASTM D2270	Min. 90	101
Water content	%	ASTM D95	Max. 0.05	None
Pour Point	°C	ASTM D7346	Max. -21	-27
Color.	-	ASTM D1500	Test & Report	4.4
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8947

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



**ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT**

Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Notes & Instructions:

- Tests conducted according to International Standard Test Methods are routinely verified to be in compliance with the latest published versions. Minor changes may be made where they have no material impact on test results and are necessitated by reasons such as safety, environmental standards and method effectiveness.
- This certificate is only valid in its entirety.
- This certificate shall not be reproduced except in full, without the written approval of the laboratory.

Approved by

Aytan Aliyeva
Head of Laboratory



	ALCO QUALITY ASSURANCE LABORATORY TEST REPORT Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21	
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Company: ALCO LLC
 3, Vali Mammadov st., Sabail dist.
 AZ1095, Baku, Azerbaijan

Certificate No.: 20251817
Date of issue: 09/09/2025

Test sample

Product: AVTOIL TAD-17
Batch number: 25091817
Tank ID: T41.2

Manufacture date: 09/09/2025
Date of sampling: 09/09/2025
Date of analysis: 09/09/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	GOST 33	Min. 17.50	17.76
Viscosity Index	-	GOST 25371	Min. 90	102
Water content	%	GOST 2477	Max. 0.05	None
Pour Point	°C	GOST 20287	Max. -25	-25
Color	-	GOST 20284	Test & Report	3.8
Density - at 15 °C - at 20 °C	g/cm ³	GOST 3900	Test & Report Max. 0.907	0.8945 0.8900

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



**ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT**

Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Notes & Instructions:

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Approved by

Aytan Aliyeva
Head of Laboratory



	<p style="text-align: center;">ALCO QUALITY ASSURANCE LABORATORY TEST REPORT</p> <p style="text-align: center;">Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21</p>	
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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20251812
Date of issue: 09/09/2025

Test sample

Product: AVTOIL TAP-15B
Batch number: 25091812
Tank ID: T41.3

Manufacture date: 09/09/2025
Date of sampling: 09/09/2025
Date of analysis: 09/09/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	GOST 33	14.00-16.00	14.12
Viscosity index	-	GOST 25371	Min. 90	93
Water content	%	GOST 2477	Max. 0.05	None
Pour Point	°C	GOST 20287	Max. -20	-21
Color.	-	GOST 20284	Test & Report	3.8
Density - at 15 °C - at 20 °C	g/cm ³	GOST 3900	Test & Report Max. 0.930	0.8932 0.8888

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



**ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT**

Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Notes & Instructions:

- Tests conducted according to International Standard Test Methods are routinely verified to be in compliance with the latest published versions. Minor changes may be made where they have no material impact on test results and are necessitated by reasons such as safety, environmental standards and method effectiveness.
- This certificate is only valid in its entirety.
- This certificate shall not be reproduced except in full, without the written approval of the laboratory.

Approved by

Aytan Aliyeva
Head of Laboratory



	<p style="text-align: center;">ALCO QUALITY ASSURANCE LABORATORY TEST REPORT</p> <p style="text-align: center;">Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21</p>	
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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20251761
Date of issue: 02/09/2025

Test sample

Product: AVTOIL HYDROPRO HLP 46
Batch number: 25071761
Tank ID: T45.1

Manufacture date: 02/09/2025
Date of sampling: 02/09/2025
Date of analysis: 02/09/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 40 °C	mm ² /s	ASTM D445	41.4-50.6	43.70
Viscosity index	-	ASTM D2270	Min. 90	124
Water content	%	ASTM D95	Max. 0.05	None
Pour Point	°C	ASTM D7346	Max. -24	-27
Color	-	ASTM D1500	Test & Report	1.9
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8542

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



**ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT**

Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Notes & Instructions:

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Approved by

Aytan Aliyeva
Head of Laboratory



	<p style="text-align: center;">ALCO QUALITY ASSURANCE LABORATORY TEST REPORT</p> <p style="text-align: center;">Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21</p>	
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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20241042
Date of issue: 05/07/2024

Test sample

Product: AVTOIL INDUSTRIAL HYDRAULIC I-20A
Batch number: 24071042
Tank ID: T45.2

Manufacture date: 02/07/2024
Date of sampling: 02/07/2024
Date of analysis: 02/07/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Bright & Clear	Bright & Clear	Pass
Kinematic viscosity at 100 °C	mm ² /s	ASTM D445	4.5-5.5	5.400	Pass
Kinematic viscosity at 40 °C	mm ² /s	ASTM D445	Test & Report	29.83	Pass
Viscosity index	-	ASTM D2270	Min. 90	107	Pass
Water content	%	ASTM D95	Max. 0.05	None	Pass
Flash Point, COC	°C	ASTM D92	Min. 190	230	Pass
Pour Point	°C	ASTM D97	Max. -10	-12	Pass
Color	-	ASTM D1500	Max. 1.0	1.0	Pass
Density at 15 °C	g/cm ³	ASTM D4052	Test&Report	0.8532	Pass

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT
Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Notes & Instructions:

- Tests conducted according to International Standard Test Methods are routinely verified to be in compliance with the latest published versions. Minor changes may be made where they have no material impact on test results and are necessitated by reasons such as safety, environmental standards and method effectiveness.
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- This certificate shall not be reproduced except in full, without the written approval of the laboratory.

Authorised signatory

Allahverdiyeva Aytan
Head of Laboratory

Isgandarli Nazrin
Lead Chemical Engineer

	<p style="text-align: center;">ALCO QUALITY ASSURANCE LABORATORY TEST REPORT</p> <p style="text-align: center;">Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21</p>	
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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20241041
Date of issue: 05/07/2024

Test sample

Product: AVTOIL INDUSTRIAL HYDRAULIC I-40A
Batch number: 24071041
Tank ID: T45.2

Manufacture date: 02/07/2024
Date of sampling: 02/07/2024
Date of analysis: 02/07/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Bright & Clear	Bright & Clear	Pass
Kinematic viscosity at 40 °C	mm ² /s	ASTM D445	61.0-75.0	62.31	Pass
TAN	mg KOH/g	ASTM D974	Max. 0.05	0.003	Pass
Water content	%	ASTM D95	Max. 0.05	None	Pass
Flash Point, COC	°C	ASTM D92	Min. 220	232	Pass
Pour Point	°C	ASTM D97	Max. -15	<-18	Pass
Color	-	ASTM D1500	Max. 3.0	1.0	Pass
Density at 15 °C	g/cm ³	ASTM D4052	Test&Report	0.8770	Pass

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.

Notes & Instructions:

- Tests conducted according to International Standard Test Methods are routinely verified to be in compliance with the latest published versions. Minor changes may be made where they have no material impact on test results and are necessitated by reasons such as safety, environmental standards and method effectiveness.
- This certificate is only valid in its entirety.
- This certificate shall not be reproduced except in full, without the written approval of the laboratory.

Authorised signatory



Allahverdiyeva Aytan
Head of Laboratory



Isgandarli Nazrin
Lead Chemical Engineer



MOL WO M 15

ulei alb de uz farmaceutic si cosmetic



MOL WO M 15 este un produs pe bază de ulei mineral, de înaltă puritate, produs prin rafinarea în mai multe etape a uleiului alb. Nu conține compuși aromatici. Corespunde celor mai importante specificații privind uleiul alb, precum prevederile referitoare la Paraffinum liquidum din Farmacopeea europeană și Farmacopeea ungară, depășind cerințele de puritate cuprinse în standardele 172.878 și 178.3620(a) ale organismului american Food and Drug Administration (FDA).

Aplicatii



Fabricarea produselor farmaceutice

Producția de vaccinuri

Fabricarea produselor cosmetice

Producția alimentelor

Material auxiliar pentru industria de conserve

Utilaje care pot intra în contact cu produse alimentare

Pentru uz industrial

Caracteristici si Beneficii

Grad înalt de puritate

Neutru din punct de vedere chimic, corespunde cerințelor de puritate cele mai stricte

În cazul respectării instrucțiunilor nu dăunează sănătății în contactul direct cu organisme vii

Incolor, fără miros

Culoarea și mirosul produsului nu se modifică

Nu conține compuși aromatici

Utilizare sigură

Specificatii si Aprobari

Clasa de viscozitate: ISO VG 15

NSF H1

HALAL

European Pharmacopoeia (Ph.Eur. Curr.revision)

Ph. Hg. VIII (Pharmacopoeia Hungarica)

FDA 172.878

FDA 178.3620(a)

KOSHER

MOL WO M 15

ulei alb de uz farmaceutic si cosmetic



Proprietati

Proprietati	Valori Tipice
Aspect	incolor, lucios, curat
Culoare (Saybolt)	+30
Densitate la 15°C [g/cm ³]	0,848
Viscozitate cinematică la 40 °C [mm ² /s]	16,2
Viscozitate dinamică la 20 °C [mPa.s]	32
Punct de curgere [°C]	-12
Punct de inflamabilitate (Cleveland) [°C]	190

Caracteristicile din tabel sunt valori tipice ale produsului si nu constituie o specificatie.

Instructiuni de manipulare si depozitare

A se păstra în recipientul original, într-o zonă uscată, ventilată corespunzător.

A se ține departe de flacără directă și alte surse de aprindere.

A se proteja de lumina directă a soarelui.

În timpul transportului, depozitării și utilizării produsului, urmați instrucțiunile de siguranță a muncii și a mediului referitoare la uleiurile minerale.

Pentru mai multe detalii, vă rugăm să citiți Fișa cu Date de Securitate a produsului.

În ambalajul original, la temperatura recomandată de depozitare: 24 luni

Termen de valabilitate la depozitare în condiții recomandate, închis, într-un ambalaj \$NAME: 36 luni

Risc de pericol la incendiu: Grad IV.

Temperatura recomandată de depozitare: max. 35°C

ТОВ «СП ЮКОЙЛ». Завод технічних олив.
Україна, 09100, Київська обл., Білоцерківський р-н, місто Біла Церква, вул. Пулюя Івана, будинок 48-А
Телефон приймальні: +38 (0612) 65 46 81
Телефон ВТК: +38 (061) 222 80 25
ЄДРПОУ 31852954

YUKO

YUKO-є зареєстрованою торговою маркою ТОВ «СП ЮКОЙЛ»

Випробувальна лабораторія ТОВ «СП ЮКОЙЛ» атестована на проведення вимірювань показників якості нафтопродуктів, технічних рідин та мастильних матеріалів.
Свідоцтво про визнання технічної компетентності № АВ-ЗП 50-24 від 31.10.2024 р. видане ДП "ДНІПРОСТАНДАРТМЕТРОЛОГІЯ", чинне до 31.10.2027 р.

Паспорт якості фасованої продукції №10064.01.01.1 Олива для автоматичних трансмісій YUKO ATF III

Виробник: ТОВ «СП ЮКОЙЛ» за ТУ У 23.2-31852954-032:2007
Розфасовано: ТОВ «СП ЮКОЙЛ» за ТУ У 23.2-31852954-027:2006
Клас експлуатаційних властивостей GM Dexron III H, Mercon V, MAN 339 V-1, MAN 339 Z-2, Volvo 97340, ZF TE-ML-04D,-14B,-16L,-17C

Дата виготовлення: Березень 2025р.
Тара: канистра 20л ПЕ; об'єм партії 200 шт.
Номер партії: 10064.05.03.25.01.



Ф.5 СТ014

Назва показника	Вимоги НД	Фактично	Метод випробувань
Густина при 20°C, кг/м ³ , не більше	890	846,1	ГОСТ 3900 або ASTM D1298
В'язкість кінематична при 100°C, мм ² /с	6,5 - 8,5	7,50	ДСТУ ГОСТ 33 або ASTM D445
Індекс в'язкості, не менше	160	169	ДСТУ ГОСТ 25371 або ASTM D2270
Температура застигання, °C, не вище	- 45	- 50	ГОСТ 20287 або ASTM D97
Температура спалаху у відкритому тиглі, °C, не нижче	175	185	ДСТУ ГОСТ 4333 або ASTM D92
Масова частка механічних домішок, %, не більше	Відсутність	Відсутність	ГОСТ 6370 з доп. за п. 6.3 цих ТУ
Масова частка води, %, не більше	Відсутність	Відсутність	ГОСТ 2477 або ASTM D95
Масова частка - сірки, %, не більше	1,0	0,051	ГОСТ 1431 або ASTM D6481 або ASTM D6443 або ASTM D4927
Зольність сульфатна, %, не більше	0,1	0,004	ДСТУ ГОСТ 12417 або ASTM D874
Випробування на корозію, бали, не більше	1b	1b	ГОСТ 2917 з доп. за п. 6.4 цих ТУ або ASTM D130
Зміна маси резини марки УИМ-1 після випробування в оливі протягом 72 год при 80°C, %, не більше	5	2,4	ГОСТ 9.030
Схильність до піноутворення, см ³ , не більше, при температурі:			ДСТУ 8420 з доп. за п.6.5 цих ТУ або ASTM D892
- при 24°C	50/0	15	
- при 94°C	50/0	30	
- при 24°C після іспиту при 94°C	50/0	20	
Колір	Червоний	Червоний	п. 6.6 цих ТУ

Паспорт якості дійсний тільки за наявності печатки.

Висновок: якість продукції відповідає вимогам нормативної документації

Гарантійний термін зберігання - 5 років



Начальник ВТК

Юлія ЄВТУШЕНКО

ТОВ «СП ЮКОЙЛ». Завод технічних олиव.
Україна, 09100, Київська обл., Білоцерківський р-н, місто Біла Церква, вул. Пулюя Івана, будинок 48-А
Телефон приймальні: +38 (0612) 65 46 81
Телефон ВТК: +38 (061) 222 80 25
ЄДРПОУ 31852954

YUKO

YUKO-є зареєстрованою торговою маркою ТОВ «СП ЮКОЙЛ»

Випробувальна лабораторія ТОВ «СП ЮКОЙЛ» атестована на проведення вимірювань показників якості нафтопродуктів, технічних рідин та мастильних матеріалів. Свідоцтво про визнання технічної компетентності № АВ 43-22 від 22.11.2022р. видане ДП «ЗАПОРІЖЖЯСТАНДАРТМЕТРОЛОГІЯ», чинне до 16.11.2024 р

Паспорт якості фасованої продукції №38131.01.01.1 Олива моторна YUKO MAX SYNTHETIC A&A 5W-30

Виробник: ТОВ «СП ЮКОЙЛ» за ТУ У 19.2-31852954-115:2021
Розфасовано: ТОВ «СП ЮКОЙЛ» за ТУ У 23.2-31852954-027:2006
Клас в'язкості: **SAE 5W-30**
Клас експлуатаційних властивостей: API SP, ILSAC GF-6A



Дата виготовлення: Вересень 2024р.
Тара: канистра 4л жерсть; об'єм партії 500 шт.
Номер партії: 38131.20.09.24.01.

Ф.5 СТП014

Назва показника	Вимоги НД	Фактично	Метод випробувань
Густина при 20°C, кг/м³, не більше	910	854,6	ГОСТ 3900 або ASTM D1298
В'язкість кінематична при температурі 100°C, мм²/с	9,3 - 12,5	11,01	ДСТУ ГОСТ 33 або ASTM D445
Індекс в'язкості, не менше	135	161	ДСТУ ГОСТ 25371 або ASTM D2270
Температура спалаху, визначена у відкритому тиглі, °C, не нижче	200	212	ДСТУ ГОСТ 4333 або ASTM D92
Температура застигання, °C, не вище	- 33	- 45	ГОСТ 20287 або ASTM D97
Масова частка механічних домішок, %, не більше	0,015	0,013	ДСТУ ГОСТ 6370
Масова частка води, %, не більше	Сліди	Сліди	ДСТУ ГОСТ 2477 або ASTM D95
Лужне число, мг КОН/г, не менше	8,0	10,06	ДСТУ 5094 або ГОСТ 11362 або ASTM D4739 або ASTM D2896
Зольність сульфатна, %, не більше	1,6	1,32	ДСТУ ISO 3987 або ASTM D874
Випробування на корозію на пластинках із сталі та міді	Витримує	Витримує	ГОСТ 2917 або ASTM D130
В'язкість динамічна, мПа·с, не більше			ДСТУ 8349 або ASTM D5293
- при мінус 30°C	6 600	5 813	
Масова частка активних елементів, %, не менше			ГОСТ 13538 або ASTM D6481 або ASTM D6443 або ASTM D4927
- кальцію	Не нормується, визначається обов'язково	0,335	
- цинку	0,05	0,122	
Колір на колориметрі ЦНТ, з розбавленням 15:85 одиниць ЦНТ, не більше	5,0	1,0	ГОСТ 20284 або ASTM D1500

Паспорт якості дійсний тільки за наявності печатки.

Висновок: якість продукції відповідає вимогам нормативної документації

Гарантійний термін зберігання - 5 років

М. П.



Начальник ВТК

Юлія ЄВТУШЕНКО

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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20252005
Date of issue: 03/10/2025

Test sample

Product: AVTOIL DYNAMIC 10W-40 SL-CF
Batch number: 25102005
Tank ID: T41.1

Manufacture date: 03/10/2025
Date of sampling: 03/10/2025
Date of analysis: 03/10/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	ASTM D445	12.5-16.3	14.65
Viscosity index	-	ASTM D2270	Min. 125	148
Water content	%	ASTM D95	Max. 0.05	None
Pour Point	°C	ASTM D7346	Max. -30	-30
TBN	mgKOH/g	ASTM D2896	Min. 6.0	6.23
Color	-	ASTM D1500	Test & Report	2.3
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8783

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.



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Notes & Instructions:

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Approved by

Aytan Aliyeva
Head of Laboratory



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Company: ALCO LLC
 3, Vali Mammadov st., Sabail dist.
 AZ1095, Baku, Azerbaijan

Certificate No.: 20252001
Date of issue: 01/10/2025

Test sample

Product: AVTOIL CLASSIC 15W-40 SG/CD
Batch number: 25102001
Tank ID: T45.3

Manufacture date: 01/10/2025
Date of sampling: 01/10/2025
Date of analysis: 01/10/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	ASTM D445	12.5-16.3	14.43
Viscosity index	-	ASTM D2270	Min. 125	138
Water content	%	ASTM D95	Max. 0.05	None
Pour Point	°C	ASTM D7346	Max. -30	-36
Color	-	ASTM D1500	Test & Report	2.8
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8806

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Approved by

Aytan Aliyeva
Head of Laboratory



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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20241022-1
Date of issue: 05/07/2024

Test sample

Product: AVTOIL 15W40 SG/CD
Batch number: 24071022-1
Tank ID: T41.2

Manufacture date: 02/07/2024
Date of sampling: 02/07/2024
Date of analysis: 02/07/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Bright & Clear	Bright & Clear	Pass
Kinematic viscosity at 100 °C	mm ² /s	ASTM D445	12.5-16.3	13.90	Pass
Viscosity index	-	ASTM D2270	Min. 120	148	Pass
Water content	%	ASTM D95	Max. 0.05	None	Pass
Flash Point, COC	°C	ASTM D92	Min. 215	238	Pass
Pour Point	°C	ASTM D97	Max. -30	-30	Pass
Color	-	ASTM D1500	Test & Report	2.5	Pass
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8700	Pass

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Authorised signatory

Allahverdiyeva Aytan
Head of Laboratory

Isgandarli Nazrin
Lead Chemical Engineer

Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 20241966
Date of issue: 18/11/2024

Test sample

Product: AVTOIL M-10G2K SAE 30 CC (GOST 17479.1-85)
Batch number: 24111966
Tank ID: T45.1

Manufacture date: 18/11/2024
Date of sampling: 18/11/2024
Date of analysis: 18/11/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Bright & Clear	Bright & Clear	Pass
Kinematic viscosity at 100 °C, min.	mm ² /s	ASTM D445	10.5-11.5	11.16	Pass
Viscosity index	-	ASTM D2270	Min. 85	112	Pass
Water content	%	ASTM D95	Max. 0.05	None	Pass
Pour Point	°C	ASTM D97	Max. -15	<-18	Pass
Color, with a dilution of 15:85, units of the CNT	-	ГОСТ 20284	Max. 4.0	0.8	Pass
Density at 15 °C	g/cm ³	ASTM D4052	Test&Report	0.8843	Pass

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Approved by

Allahverdiyeva Aytan
Head of Laboratory





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Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 2025396-1
Date of issue: 06/03/2025

Test sample

Product: AVTOIL M-10G2
Batch number: 2503396-1
Tank ID: T45.4

Manufacture date: 06/03/2025
Date of sampling: 06/03/2025
Date of analysis: 06/03/2025

Test result

Parameters	Unit	Test method	Limit	Test result
Appearance	-	Visual	Bright & Clear	Bright & Clear
Kinematic viscosity at 100 °C	mm ² /s	GOST 33	10.5-11.5	10.60
Viscosity index	-	GOST 25371	Min. 85	101
Water content	%	GOST 2477	Max. 0.05	None
Pour Point	°C	GOST 20287	Max. -15	-21
Color, with a dilution of 15:85, units of the CNT	-	GOST 20284	Max. 5.0	0.9
Density - at 15 °C - at 20 °C	g/cm ³	GOST 3900	Test & Report Max. 0.905	0.8861 0.8817

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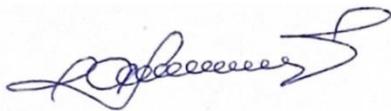
Shelf life: 5 years from the date of manufacture of the product if proper storage conditions are followed.

This product meets the specification set out in its product data sheet (PDS) and has been manufactured in a facility fully complying with the requirements of Integrated Management System standards.

Notes & Instructions:

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Approved by



Aytan Allahverdiyeva
Head of Laboratory





ALCO QUALITY ASSURANCE LABORATORY
TEST REPORT
Accreditation No: AZS ISO/IEC 17025:2020/AZ 01.0571.01.21



Company: ALCO LLC
3, Vali Mammadov st., Sabail dist.
AZ1095, Baku, Azerbaijan

Certificate No.: 2024415-1
Date of issue: 15/03/2024

Test sample

Product: AVTOIL T-1500
Batch number: 2403415
Tank ID: T61.1

Manufacture date: 15/03/2024
Date of sampling: 15/03/2024
Date of analysis: 15/03/2024

Test result

Parameters	Unit	Test method	Limit	Test result	Conclusion
Appearance	-	Visual	Bright & Clear	Bright & Clear	Pass
Kinematic viscosity					
-at 40°C	mm ² /s	ASTM D445	-	10.35	Pass
-at 50°C			Max. 8.0	7.60	
-at 100°C			-	2.543	
Water content	%	ASTM D95	Max. 0.05	None	Pass
Mechanical impurities	%	ASTM D 4807	None	None	Pass
Closed Cup Flash Point	°C	ASTM D93	Min. 135	143	Pass
Pour Point	°C	ASTM D97	Max. -45	-45	Pass
TAN	mg KOH/g	ASTM D974	Max. 0.01	0.007	Pass
Color	-	ASTM D1500	Max. 1.5	0.5	Pass
Dielectric dissipation factor at 90°C	%	IEC 60247	Max. 0.50	0.20	Pass
Dielectric Breakdown Voltage	kV	IEC 60156	Min. 30	60.6	Pass
Density at 15 °C	g/cm ³	ASTM D4052	Test & Report	0.8863	Pass

ALCO QUALITY ASSURANCE LABORATORY accredited by AzAK for AZS ISO/IEC 17025:2020 at test laboratory.

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Notes & Instructions:

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Authorised signatory



Allahverdiyeva Aytan
Head of Laboratory



Isgandarli Nazrin
Lead Chemical Engineer





Mobil Polyrex™ EM

Electric Motor Bearing Grease



Product Description

Super-premium Mobil Polyrex™ EM Series greases are specially formulated for electric-motor bearings. The advanced thickener formulation and proprietary manufacturing techniques provide improved bearing performance and protection for long electric motor life.

Features and Benefits

Mobil Polyrex EM and Mobil Polyrex EM 103 offer the following features and benefits:

Features	Advantages and Potential Benefits
Outstanding grease life	Outstanding long-life, high-temperature lubrication of ball and roller bearings, particularly in sealed-for-life applications
Advanced polyurea thickener	Increased durability versus conventional polyurea greases when subjected to mechanical shear forces
Excellent corrosion resistance	Mobil Polyrex EM and Mobil Polyrex EM 103 provide protection against rust and corrosion. Mobil Polyrex EM provides additional protection under mild salt-water wash conditions versus Polyrex EM 103
Low-noise properties	Mobil Polyrex EM is suitable for lubrication of ball bearings in many noise-sensitive applications

Applications

Mobil Polyrex EM greases are recommended by many major bearing and electric motor manufacturers for long-life lubrication of electric motor ball and roller bearings.

Mobil Polyrex EM 103 is more specifically recommended for applications such as vertically mounted bearings, or very large motors where a stiffer grease consistency may be required by the OEM, and low noise properties are not required.

Mobil Polyrex EM greases have been shown to be compatible with a number of ExxonMobil lithium complex greases, as well as competitive electric motor mineral polyurea products, as determined by the methodology of ASTM D6185. For specific questions about grease compatibility, contact your Mobil representative.

Key applications include:

- Electric motor bearings
- Fin fan bearings
- High-temperature pump bearings
- Factory-filled, sealed-for-life ball bearings
- Ball or roller bearings operating at high temperatures where low oil separation is required
- Mobil Polyrex EM for ball or roller bearings operating in noise sensitive environments

Specifications and Approvals

Mobil Polyrex EM meets or exceeds the requirements of:	Mobil Polyrex EM	Mobil Polyrex EM 103
DIN 51825: (2004-06)	K2P-20	

Typical Properties

	Mobil Polyrex EM	Mobil Polyrex EM 103
NLGI Grade	2	3
Color	Blue	Blue
Base Oil Viscosity, ASTM D 445		
cSt @ 40°C	115	115
cSt @ 100°C	12.2	12.2
Viscosity Index, ASTM D 2270	95	95
Penetration, ASTM D217 worked, 60x, mm/10	285	250
Penetration Change after 100.000 strokes, ASTM D217, mm/10	40	40
Dropping Point, ASTM D 2265, °C (°F)	260	270
Oil separation test, ASTM D 1742, %	0.5	0.1
High Temperature Grease Life, ASTM D 3336, Hours @ 177°C750+		750+
4-Ball Wear Scar, ASTM D 2266, @ 40kg, 1200 rpm, 75°C, 1 hr, mm	0.41	0.6
Low Temperature Torque, ASTM D 1478, g-cm @ -29°C		
Starting	7500	9300
Running	800	1000
EMCOR Corrosion Performance, 10% Synthetic Sea Water ASTM D 6138 (Prepared As Per ASTM D 665B)	0,1 (No Rust)	
Rust Protection, ASTM D 1743, Distilled Water	Pass	Pass
Copper Corrosion Resistance, ASTM D 4048	1A	1A
Water Washout, ASTM D 1264, %	1.9	0.8

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and when the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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2-2014

Exxon Mobil Corporation
3225 Gallows Road
Fairfax, VA 22037

1-800-ASK MOBIL (275-6624)

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Mobilube HD Plus

Mobil Commercial-Vehicle-Lube , United Kingdom

Extra High Performance Commercial Gear Lubricants

Product Description

Mobilube HD Plus 80W-90 and 85W-140 are extra high performance commercial gear lubricants formulated from select base oils and an advanced additive system. These lubricants are engineered for performance in heavy-duty commercial transmissions, axles, and final drives where extreme pressures and shock loading are expected. They provide excellent chemical and thermal stability at elevated bulk oil temperatures, good performance at low temperatures, and have demonstrated good rust protection resulting from water contamination and wet conditions. They are recommended by ExxonMobil for applications where API GL-5 and MT-1 service is required.

Features and Benefits

Today's heavy equipment applications place higher performance demands on drive train lubricants. Higher speeds, higher torque, and heavier loads require improved formulations to maximise equipment life and optimise operating costs. Longer service intervals place additional demands on the gear lubricant. Mobilube HD Plus gear lubricants are engineered to meet these challenges. The key benefits include:

Features	Advantages and Potential Benefits
Excellent thermal stability and resistance to high temperature oxidation	Extended gear and bearing life due to minimal deposits and longer seal life
Good protection against low speed/high torque wear and against high speed scoring	Increased load carrying capability and reduced operating costs
Excellent rust, staining, and corrosion protection	Reduced wear and longer component life
Effective low temperature lubrication	Reduced wear and ease of start-up
Wide multipurpose capability	Reduced number of gear lubricants to simplify inventory and minimize misapplication
Good resistance to foaming	Maintains film strength for effective lubrication
Compatible with typical automotive seals and gaskets	Minimum leakage and reduced contamination

Applications

Recommended by ExxonMobil for use in:

- Heavy-duty manual transmissions, axles, and final drives requiring API GL-5 and MT-1 level performance
- On-highway light and heavy-duty trucks, busses, vans, and cars
- Off-highway industries including: construction, mining, quarrying, and agriculture
- Other heavy-duty industrial and automotive applications involving hypoid and other gears operating under conditions where high speed/shock load, high speed/low torque, and/or low speed/high torque conditions prevail
 - Initial fill, top-off, and refill of enclosed commercial gearing in manual or semiautomatic transmissions where gear lubricants are recommended including drive axles and final drives
 - Not recommended for applications requiring API GL-4 Level performance
 - Not intended for transmissions for which engine oil or automatic transmission fluids are recommended

Specifications and Approvals

This product has the following approvals:	80W-90	85W-140

This product has the following approvals:	80W-90	85W-140
Mack GO-J	X	X
SAE J2360	X	X
Volvo 97321	X	X

This product is of quality level, but not approved:	80W-90	85W-140
MIL (US) MIL-PRF-2105E	X	X

This product meets or exceeds the requirements of the following industry specification:	80W-90	85W-140
API GL-5	X	X
API MT-1	X	X
Meritor O-94	X	
Scania STO 1:0	X	X

This product meets or exceeds the requirements of:	80W-90	85W-140
Meritor O-94		X

Properties and Specifications

Property	80W-90	85W-140
Grade	SAE 80W-90	SAE 85W-140
Flash Point, Cleveland Open Cup, °C, ASTM D92	210	230
Kinematic Viscosity @ 100 C, mm ² /s, ASTM D445	14.5	25.4
Kinematic Viscosity @ 40 C, mm ² /s, ASTM D445	139	333
Pour Point, °C, ASTM D97	-27	-18
Viscosity Index, ASTM D2270	103	99

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.aspx>

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12-2025

Esso Petroleum Company limited

ExxonMobil House, Ermyn Way, Leatherhead, Surrey KT22 8UX

You can always contact our Technical Help Desk engineers on Mobil lubricants and services related questions: <https://www.mobil.co.uk/en-gb/contact->

[us-technical](#)

44 (0)1372 222000

<http://www.exxonmobil.com>

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Mobilith SHC™ Series

Mobil Grease , United States

Grease

Product Description

Mobilith SHC™ Series greases are superior performance products designed for a wide variety of applications at extremes of temperature. They combine the unique features of synthetic base fluids with those of a high quality lithium complex thickener. The wax-free nature of synthetic fluids and the low coefficient of traction (compared with mineral oils), provide excellent low temperature pumpability and very low starting and running torque. These products offer the potential for energy savings and can reduce operating temperatures in the load zone of spherical roller and ball bearings. The lithium complex thickener contributes excellent adhesion, structural stability and resistance to water. The greases have a high level of chemical stability and are formulated with special additive combinations to provide excellent protection against wear, rust and corrosion, and providing operating viscosity at high and low temperatures. Mobilith SHC Series greases are available in seven grades, varying in base oil viscosity from ISO VG 100 to 1500 and in NLGI grade from 2 to 00.

Mobilith SHC Series greases have become the products of choice for many users, in many industries worldwide. Their reputation is based on their exceptional quality, reliability, versatility and the performance benefits they deliver.

Features and Benefits

The Mobil SHC brand of oils and greases are recognized and appreciated around the world for their innovation and outstanding performance. The Mobilith SHC series symbolizes ExxonMobil's continued commitment to using advanced technology to provide outstanding products. A key factor in the development of the Mobilith SHC Series were the close contacts between our scientists and application specialists with key Original Equipment Manufacturers (OEMs) to ensure that our product offerings would provide exceptional performance in the continually evolving industrial equipment designs.

Our work with equipment builders has helped confirm the results from our own laboratory tests showing the exceptional performance of the Mobilith SHC Series lubricants. These benefits include longer grease life, enhanced bearing protection and bearing life, wide temperature range of application, and the potential for improved mechanical efficiency and energy savings.

To combat high thermal exposure of the oil our product formulation scientists chose proprietary synthetic base oils for Mobilith SHC Series oils because of their exceptional thermal/oxidative resistance potential. Our scientists developed a state-of-the-art lithium complex thickener technology and used specific additives to enhance the performance of each grade of the Mobilith SHC Series product family. The Mobilith SHC Series greases offer the following features and benefits:

Features	Advantages and Potential Benefits
Outstanding high temperature and low temperature performance	Wide application temperature ranges, with excellent protection at high temperatures and low torque, easy start-up at low temperatures
Excellent protection against wear, rust and corrosion	Reduced downtime and maintenance costs because of reduced wear, rust and corrosion
Excellent thermal stability and oxidation resistance	Extended service life with longer intervals between relubrication and improved bearing life
Low traction coefficient	Potential to improve mechanical life and reduced energy consumption
Includes both high and low viscosity grades	Options for outstanding protection of slow speed, heavily loaded bearings, and options for good low temperature performance
Outstanding structural stability in the presence of water	Retains excellent grease performance in hostile aqueous environments
Low volatility	Helps resist viscosity increase at high temperatures to maximize relubrication intervals and bearing life

Applications

Application Considerations: While Mobilith SHC Series greases are compatible with most mineral oil based products, admixture may detract from their performance. Consequently it is recommended that before changing a system to one of the Mobilith SHC Series, it should be thoroughly cleaned out to achieve the maximum performance benefits. While the Mobilith SHC Series greases share many performance benefits, their applications are best described in terms of each product grade:

- Mobilith SHC 100 is an antiwear and extreme pressure grease primarily recommended for higher speed applications such as electric motors, where reduced friction, low wear and long service life are required. It is an NLGI 2 Grade / ISO VG 100 grease with a synthetic base fluid. Its operating temperature range is -40° C* to 150° C.
- Mobilith SHC 220 is a multi-purpose, NLGI 2 extreme pressure grease recommended for heavy-duty automotive and industrial applications. It uses an ISO VG 220 synthetic base fluid. Mobilith SHC 220 has a recommended operating temperature range of -40° C* to 150° C.
- Mobilith SHC 221 is a multi-purpose, extreme pressure grease recommended for heavy-duty automotive and industrial applications, particularly where centralized grease systems are utilized. It uses an ISO VG 220 synthetic base fluid. Mobilith SHC 221 has a recommended operating temperature range of -40° C to 150° C.
- Mobilith SHC 460 is an NLGI 1.5 Grade grease with ISO VG 460 synthetic base fluid and is an extreme pressure grease recommended for tough industrial and marine applications. It provides outstanding bearing protection under heavy loads at low-to-moderate speeds and in applications where water resistance is a critical factor. Mobilith SHC 460 has demonstrated outstanding performance in steel mills, paper mills and marine applications. The recommended operating temperature range is -30° C* to 150°C.
- Mobilith SHC 1500 is an NLGI 1.5 Grade / ISO VG 1500 grease with a synthetic base fluid. It is intended for use in plain and rolling element bearings operating at extremely slow speeds, under heavy loads and high temperatures. Mobilith SHC 1500 has a recommended operating temperature range of -30 °C* to 150 °C with appropriate relubrication intervals. Continuous lubrication with Mobilith SHC 1500 has been very effective in prolonging bearing life in a severe roll press application. Mobilith SHC 1500 has also provided excellent performance in rotary kiln roller bearings and in slag transfer rail car bearings.
- Mobilith SHC 007 is an NLGI 00 Grade / ISO VG 460 grease with a synthetic base fluid; it has a recommended operating temperature range of -50° C to 150 ° C with appropriate relubrication intervals. Its primary uses are in grease filled industrial gear cases subject to high temperatures, where conventional semi fluid greases will not provide acceptable lubricant life and in non-driven heavy-duty truck trailer wheel hubs.

*Low temperature claims based on ASTM D 1478 results vs. maximum limits of 10,000 / 1000 gcm @ startup and 1 hour respectively.

Specifications and Approvals

This product has the following approvals:	007	100	1500	220	221	460
AAR-M942		X			X	
Siemens Gamesa Renewable Energy offshore direct drive wind turbine main bearing	X					

This product is recommended for use in applications requiring:	007	100	1500	220	221	460
CEN EN 12081:2017		X				

This product meets or exceeds the requirements of:	007	100	1500	220	221	460
DIN 51825:2004-06 - KP HC 1-2 N -30			X			
DIN 51825:2004-06 - KP HC 1-2 N -40						X
DIN 51825:2004-06 - KP HC 2 N -30				X		
DIN 51825:2004-06 - KP HC 2 N -40		X				

This product meets or exceeds the requirements of:	007	100	1500	220	221	460
DIN 51826:2005-01 - GP HC 00 K -30	X					

Properties and Specifications

Property	007	100	1500	220	221	460
Grade	NLGI 00	NLGI 2	NLGI 1.5	NLGI 2	NLGI 1	NLGI 1.5
Thickener Type	Lithium Complex Greases					
Color, Visual	Red	Red	Red	Red	Light Tan	Red
Copper Strip Corrosion, 24 h, 100 C, Rating, ASTM D4048	1B	1B	1B	1B		1B
Corrosion Preventive Properties, Rating, ASTM D1743			Pass	Pass	Pass	Pass
Dropping Point, °C, ASTM D2265		265	265	265	265	265
Four-Ball Extreme Pressure Test, Weld Point, kgf, ASTM D2596	250	250	250	250	250	250
Four-Ball Wear Test, Scar Diameter, mm, ASTM D2266	0.5	0.5	0.5	0.5	0.5	0.5
Oil Separation, 0.25 psi, 24 h @ 25 C, mass%, ASTM D1742			<1	2		3
Penetration, 60X, 0.1 mm, ASTM D217	415	280	305	280	325	305
SKF Emscor Rust Test, 10% Synthetic Sea Water, ASTM D6138		0, 1	0, 1	0, 1		0, 1
SKF Emscor Rust Test, Acidic Water, ASTM D6138		0, 1	0, 1	0, 1		0, 1
SKF Emscor Rust Test, Distilled Water, ASTM D6138	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
Viscosity @ 100 C, Base Oil, mm ² /s, ASTM D445	55.6	16.3	149	30.3	30.3	55.6
Viscosity @ 40 C, Base Oil, mm ² /s, ASTM D445	460	100	1500	220	220	460
Viscosity Index, ASTM D2270	188	175	212	179	179	188
Water Washout, Loss @ 79 C, wt%, ASTM D1264		6	6	1.5		7

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.aspx>

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Mobil Pegasus™ 705

Mobil Industrial , United Kingdom

Gas Engine Oil

Product Description

Mobil Pegasus 705 is a premium high performance SAE 40 gas engine oil formulated to lubricate a wide range of natural gas fuelled engines. It is recommended for the newer stoichiometric and lean burn high-speed four-cycle engines that are sensitive to valve face and seat wear. This oil is also recommended for the lubrication of the gas compressors and wide range of engines requiring low ash oil. Pegasus 705 is formulated from select high quality, mineral base oils and an advanced technology additive system engineered to provide excellent protection of engine and compressor components and reduced levels of combustion chamber deposits. It exhibits exceptional chemical stability and resistance to oxidation and nitration resulting in longer oil life and lower filter replacement costs. These performance advantages combined with outstanding detergency and dispersancy properties minimise the formation of ash and carbon deposits that could result in poor engine performance and detonation.

Pegasus 705 exhibits excellent anti-corrosion properties that prevent corrosive wear in cylinders, valve areas and bearings resulting in longer engine life. Its high level of anti-wear performance reduces wear of rings, liners, and bearings. It also provides exceptional valve seat and face protection and reduces the wear and deposit formation in the critical valve guides of highly loaded turbocharged four-cycle engines.

Features and Benefits

Mobil Pegasus 705 gas engine oil provides for cleaner engines, lower wear rates and improved engine performance. The product is particularly beneficial in increasing valve life and engine performance in the newer lean-burn, design high-speed four-cycle engines operating under heavy loads. The result is reduced maintenance costs and improved production capacity. The excellent chemical and oxidation stability results in longer drain periods and reduced filter costs. Pegasus 705 reduces ash and carbon formation in combustion chambers resulting in lower maintenance costs while improving engine performance and reducing fuel costs.

Features	Advantages and Potential Benefits
Excellent Anti-wear and Anti-scuff Properties	<ul style="list-style-type: none"> Lower wear of engine components Reduced scuffing of liners of highly loaded gas engines Provides excellent break-in protection
Exceptional Oxidation and Chemical Stability	<ul style="list-style-type: none"> Cleaner engines Extended drain intervals Reduced filter costs Excellent resistance to oxidation and nitration Reduces coking and formation of undercrown deposits
Low Ash Formulation	<ul style="list-style-type: none"> Reduces valve seat, face and guide wear Controls combustion chamber ash formation and improves spark plug performance Improved engine performance Lower fuel costs
Corrosion Resistance	<ul style="list-style-type: none"> Reduces valve guide wear in four stroke-cycle gas engines Protects bearings and internal components
Outstanding Detergency and Dispersancy Properties	<ul style="list-style-type: none"> Cleaner engines Improved upper cylinder performance Longer filter life

Features	Advantages and Potential Benefits
	Lower maintenance costs

Applications

- High-speed lean-burn and stoichiometric gas engines sensitive to valve seat recession
- Crankcases and power cylinders of spark-ignited two and four-stroke cycle gas engines
- Recommended for applications requiring low ash formulations
- Reciprocating natural gas compressor cylinders
- High output or ambient rated engines operating at or in excess of rated capacity under high temperatures
- Engines operating on fuel containing low levels of hydrogen sulphide

Specifications and Approvals

This product has the following approvals:
INNIO Jenbacher TI 1000-1108 (Class A fuel gas, Type 9)
INNIO Jenbacher TI 1000-1109 (Class A fuel gas, Type 2, 3, 4 & 6)
INNIO Jenbacher TI 1000-1109 (Class B fuel gas, Type 4 & 6)
MAN M 3271-2
MTU Gas Engines S4000 L32, L33 using natural gas
MWM TR 0199-99-2105, Lube Oils for Gas Engines: TCG2016 < 48.5 kWe / cyl. TCG2020 < 95.0 kWe / cyl. TCG2032 < 260.0 kWe / cy
Perkins Gas Engine Oil - Natural Gas
Wartsila 220SG
Wartsila 28SG
Wartsila 32DF
Wartsila 34SG
Wartsila W12V150SG, W12V175SG, W16V175SG
Wartsila W25SG
Rolls-Royce Solutions Augsburg (former MTU Onsite Energy) Gas Engines Series 400 - all engines with natural gas and propane gas
INNIO Jenbacher TI 1000-1109 (Class C fuel gas, Type 4A, 4B & 4C)
MTU Gas Engines S4000 L61, L62, L63 using natural gas

This product meets or exceeds the requirements of:
Caterpillar

Properties and Specifications

Property	
Grade	SAE 40
Pour Point, °C, ASTM D97	-18
Ash, Sulfated, mass%, ASTM D874	0.5
Kinematic Viscosity @ 100 C, mm ² /s, ASTM D445	13.2
Flash Point, Cleveland Open Cup, °C, ASTM D92	252
Density 15 C, kg/L, CALCULATED	0.887
Base Number - Xylene/Acetic Acid, mg KOH/g, ASTM D2896 (*)	5.7
Kinematic Viscosity @ 40 C, mm ² /s, ASTM D445	126
Viscosity Index, ASTM D2270	98

(*) use of other ASTM approved solvents may yield different results.

Health and safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ <http://www.msds.exxonmobil.com/psims/psims.aspx>

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03-2025

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You can always contact our Technical Help Desk engineers on Mobil lubricants and services related questions: <https://www.mobil.co.uk/en-gb/contact-us-technical>

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Formerly Known As: Shell Tellus T

Shell Tellus S2 V 32

- Extra Protection
- Versatile Applications

Industrial Hydraulic Fluid for wide temperature range

Shell Tellus S2 V fluids are high performance hydraulic fluids that use Shell's unique patented technology with excellent viscosity control under both severe mechanical stress and across a wide range of temperatures. They provide outstanding protection and performance in most mobile equipment and other applications subjected to wider ranges of ambient or operating temperatures.

DESIGNED TO MEET CHALLENGES

Performance, Features & Benefits

- **Long fluid life – Maintenance saving**

Shell Tellus S2 V fluids help extend equipment maintenance intervals by resisting thermal and chemical breakdown. This minimizes sludge formation and provides excellent performance in the industry standard ASTM D943 TOST test (Turbine Oil Stability Test), providing better reliability and system cleanliness.

Shell Tellus S2 V fluids also have good stability in the presence of moisture, which ensures long fluid life and reduces the risk of corrosion and rusting, particularly in moist or humid environments.

Highly shear stable viscosity modifiers help minimize variations in the fluid properties throughout the fluid drain interval.

- **Outstanding wear protection**

Proven zinc-based anti-wear additives are incorporated to be effective throughout the range of operating conditions, including low load and severe duty high load conditions. Outstanding performance in a range of piston and vane pump tests, including the tough Denison T6C (dry and wet versions) and the demanding Vickers 35VQ25, demonstrates how Shell Tellus S2 V fluids can help system components last longer.

- **Maintaining system efficiency**

The extended temperature range capability of Shell Tellus S2 V allows efficient operation of mobile equipment from cold start to normal operating conditions.

Superior cleanliness, excellent filterability and high performance water separation, air release and anti-foam characteristics all help contribute to maintaining or enhancing the efficiency of hydraulic systems.

The unique additive system in Shell Tellus S2 V, in combination with superior cleanliness (meeting the requirements of max ISO 4406 21/19/16 class, ex Shell filling lines. As recognized by DIN 51524 specification, the oil is exposed to various influences with transport and storage that could effect the cleanliness level) helps reduce the impact of contaminants on filter blocking, allowing both extended filter life and use of finer filtration for extra equipment protection.

Shell Tellus S2 V fluids are formulated for fast air release without excessive foaming to help efficient hydraulic power transfer and minimise fluid and equipment impacts of cavitation-induced oxidation that can shorten fluid life.

Main Applications



- **Mobile/external hydraulic applications**

Hydraulic and fluid power transmission systems in exposed environments can be subject to wide variations in temperature. The high viscosity index of Shell Tellus S2 V helps deliver responsive performance from cold start conditions to full load, severe duty operation.

- **Precision hydraulic systems**

Precision hydraulic systems require excellent control of fluid viscosity over the operating cycle. Shell Tellus S2 V provides greater temperature-viscosity stability compared to ISO HM fluids that can help improve the performance of such systems.

For more severe operating conditions, longer fluid life and enhanced efficiency, the Shell Tellus “S3” and “S4” ranges offer additional performance benefits.

Specifications, Approvals & Recommendations

- Denison Hydraulics (HF-0, HF-1, HF-2)
- Fives Cincinatti P-68 (ISO 32)
- Eaton Vickers (Brochure 694)
- Swedish Standard SS 15 54 34 AM
- ISO 11158 (HV fluids)
- ASTM 6158-05 (HV fluids)
- DIN 51524 Part 3 HVLP type

- GB 111181-1-94 (HV fluids)

- Bosch Rexroth RD 90220-01 (2011), ISO 32-68

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

Compatibility & Miscibility

- **Compatibility**

Shell Tellus S2 V fluids are suitable for use with most hydraulic pumps. However, please consult your Shell Representative before using in pumps containing silver plated components.

- **Fluid Compatibility**

Shell Tellus S2 V fluids are compatible with most other mineral oil based hydraulic fluids. However, mineral oil hydraulic fluids should not be mixed with other fluid types (e.g. environmentally acceptable or fire resistant fluids).

- **Seal & Paint Compatibility**

Shell Tellus S2 V fluids are compatible with seal materials and paints normally specified for use with mineral oils.

Typical Physical Characteristics

Properties			Method	Tellus S2 V 32	
ISO Viscosity Grade			ISO 3448	32	
ISO Fluid Type				HV	
Kinematic Viscosity	@-20°C	cSt	ASTM D445	1300	
Kinematic Viscosity	@40°C	cSt	ASTM D445	32	
Kinematic Viscosity	@100°C	cSt	ASTM D445	6.1	
Viscosity Index			ISO 2909	143	
Density	@15°C	kg/m ³	ISO 12185	872	
Flash Point (COC)			°C	ISO 2592	210
Pour Point			°C	ISO 3016	-39
Dielectric Strength*			kV minimum	ASTM D877	30

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

- * Dielectric strength value applies only to "point of manufacture" at a Shell authorized manufacturing facility. As with all hydraulic fluids, contamination with water or particulate leads to a reduction in dielectric strength.

Health, Safety & Environment

- Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>
- **Protect the Environment**
Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.

Viscosity - Temperature Diagram for Shell Tellus S2 V

