

MOGUL OIL® AU

Descriere:

MOGUL OIL® AU sunt uleiuri formulate din uleiuri naftenice aditivate ISO VG 20.

Proprietăți caracteristice:

- rezistență excelentă la oxidare, ceea ce permite o viață mai lungă a uleiului;
- excelenta protecție la uzură.

Caracteristici:

Nr. Crt.	CARACTERISTICI	Metoda de analiza	Valori tipice
1	Densitate relativa la 15 °C max.	SR ISO 3675	0,905
2	Viscozitate cinematica la 20 °C ,max cSt	SRISO 3104	55
3	Viscozitate cinematica la 50 °C , cSt	SRISO 3104	12-14
4	Viscozitate cinematica la -20 °C ,max cSt	SRISO 3104	2500
5.	Punct de inflamabilitate M, min. °C	STAS 5489	163
6.	Punct de congelare, min °C	STAS 39-80	-45
7.	Indice de neutralizare,max mgKOH/g	STAS 23-75	0,07
8.	Timp de dezemulsionare pentru ,max sec	STAS 56	90
9.	Capacitatea de protectie contra ruginirii otelului		Trece proba
10.	Actiune coroziva pe lama de cupru 3h la 100 °C, max	SR ISO 2160	negativ
11.	Aciditate si alcalinitate minerala		STAS 22
12.	Impuritati mecanice	STAS 33	lipsa
13	Apa	STAS 24/2	lipsa
14	Cenusa,max %	SR EN ISO6245	lipsa

Ambalare: 20L, 200L si 1000L.

Termen de garantie: 5 ani in depozitare.

CERTIFICATE OF ANALYSIS № 27

PROTEC Litol -24 M Lubricating Grease

TU U 19.2-37838186-006:2012 zm. 1,2

Batch № 27

Manufacturing date 22.01.24 Batch net weigh 2,06 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Homogeneous ointment from light yellow to brown color	Homogeneous light brown ointment	GSTU 38.001
2	Penetration at 25°C, 0,1 mm, in range	220 - 280	250	GOST 5346 method V
3	Dropping point, °C, not lower than	145	162	GOST 6793
4	Shear stability at 50°C, Pa, not less than	120	255	GOST 7143 method B
5	Colloid stability, %, of separated oil, not more than	16	6,77	GOST 7142
6	Water content	nil	nil	DSTU GOST 2477
7	Free alkali content NaOH, %, not more than	0,2	0,11	GOST 6707
8	Mechanical impurities content, %, not more than	0,05	0,01	GOST 6479
9	Viscosity at - 20°C and velocity gradient of 10 s ⁻¹ , Pa*s, not more than	1 000	650	GOST 7163
10	Vaporability at 100 °C, %, not more than	8	1	GOST 9566
11	Metal corrosion	Pass	Pass	GOST 9.080
12	Water resistance at 79°C, 1 hour, %, not more than	6	4	ASTM D1264
13	Four ball EP test machine (20±5°C): critical load, N, not less than	610	735	GOST 9490
14	Four ball EP test machine (20±5°C): welding load, N, not less than	1 230	1 600	GOST 9490
15	Four ball EP test machine (20±5°C): scuff index, not less than	270	330	GOST 9490
16	Protective property	Pass	Pass	GOST 9.054 method 1
17	Elastomer of grade 26-44, %: volume change	-8 - 12	-1,8	GOST 9.030

Manufactured by KSM PROTEC LLC, UKRAINE

Conclusion: PROTEC Litol -24 M Lubricating Grease sample satisfies the requirement of TU U 19.2-37838186-006:2012 zm. 1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture. Storage conditions according to DSTU 4454.

Laboratory technician

Laboratory head

Date of issue 24.01.24p.



CERTIFICATE OF ANALYSIS № 7

TEMOL Antifreeze Extra G11 Green

TU U 20.5-30858281-009:2016 zm.1,2

Batch № 7

Manufacturing date 23.01.24 Batch net weight 7,4 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Homogeneous transparent liquid without mechanical impurities. The color must match the color of the sample standard	Homogeneous transparent liquid without mechanical impurities of green color	p. 7
2	Density at 20 °C, kg/in3, not lower	1,065	1,072	DSTU 7261
3	Temperature of the onset of crystallization, °C, not more than	-38	-39	p. 7.5
4	Boiling Point, °C, not lower	104	106	p. 7.13 or ASTM D1120
5	Corrosion effect on metals, g/m2 per day, not more than: copper, brass, steel, cast iron, aluminum	0,15	0,097	p. 7.7
6	Corrosion effect on metals, g/m2 per day, not more than: solder	0,35	0,083	p. 7.7
7	Foaming: the volume of foam, sm³, not more than	150	40	p. 7.8 or ASTM D1881
8	Foaming: foam stability, s, not more than	5	3	p. 7.8 or ASTM D1881
9	pH, within	7,5 - 11	8,35	DSTU 2201.1 and p. 7.10 or ASTM D1287 and p. 7.10
10	Alkalinity, sm3, not lower	1,5	2,47	p. 7.11

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: TEMOL Antifreeze Extra G11 Green sample satisfies the requirement of TU U 20.5-30858281-009:2016 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture

Laboratory technician

Laboratory head

Date of issue 23.24.01.24p.




TEMOL Antifreeze Luxe G12 Red

TU U 20.5-30858281-009:2016 zm.1,2

Batch № 6

Manufacturing date 19.01.24 Batch net weight 7 t

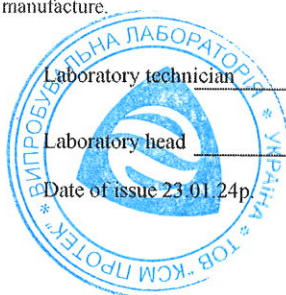
Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Homogeneous transparent liquid without mechanical impurities. The color must match the color of the sample standard	Homogeneous transparent liquid without mechanical impurities of red color	p.7.4
2	Density at 20.0°C, kg/m ³ , not lower	1.065	1.072	DSTU 7261
3	Temperature of the onset of crystallization, °C, not more than	-38	-40	p.7.5
4	Boiling Point, °C, not lower	104	106	p. 7.13 or ASTM D1120
5	Corrosion effect on metals, g/m ² per day, not more than: copper, brass, steel, cast iron, aluminum	0.15	0.088	p.7.7
6	Corrosion effect on metals, g/m ² per day, not more than: solder	0.3	0.095	p.7.7
7	Foaming: the volume of foam, cm ³ , not more than	150	40	p.7.8 or ASTM D1881
8	Foaming: foam stability, s, not more than	5	0	p.7.8 or ASTM D1881
9	pH, within	7,5 - 11	7,74	DSTU 2201.1 and p.7.10 or ASTM D1287 and p.7.10
10	Alkalinity, cm ³ , not lower	1,0	1,89	p. 7.11

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: TEMOL Antifreeze Luxe G12 Red sample satisfies the requirement of TU U 20.5-30858281-009:2016 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.



Laboratory technician

Laboratory head

Date of issue 23.01.24p

Охлаждающая жидкость TEMOL Tosol A-40

ТУ У 20.5-30858281-009:2016 из.1



Партия № 12

Дата изготовления 17.02.23 Маса нетто 4 т

Физико-химические показатели

№	Наименование показателя	Норма по НТД	Фактически	Метод испытания
1	Внешний вид	Однородная прозрачная жидкость без механических примесей. Цвет должен соответствовать цвету образцов-эталона	Однородная прозрачная жидкость без механических примесей синего цвета	П. 8.4
2	Плотность при 20°C, кг/м ³ , не менее	1065	1,073	ДСТУ 7261
3	Температура начала кристаллизации, °C, не выше	Минус 38	Минус 39	П. 8.5
4	Фракционные данные: температура начала перегонки, °C, не ниже	100	105	П. 8.6
5	Фракционные данные: массовая доля жидкости, перегоняемой до достижения температуры 150°C, %, не более	55	46	П. 8.6
6	Коррозионное воздействие на металлы, г/м ² ·сут, не более: медь, латунь, сталь, чугун, алюминий	0,3	0,092	П. 8.7
7	Коррозионное воздействие на металлы, г/м ² ·сут, не более: припой	0,5	0,106	П. 8.7
8	Вспениваемость: объем пены, см ³ , не более	50	40	П. 8.8 или ASTM D1881
9	Вспениваемость: устойчивость пены, с, не более	5	2	П. 8.8 или ASTM D1881
10	Набухание резины, %, не более	5	1,5	П. 8.9
11	Водородный показатель (pH) при 20°C	7,5 - 11	9,22	П. 8.10 или ASTM D1287
12	Щелочность, см ³ , не менее	2,0	20,06	П. 8.11 или ASTM D1121

Производитель: ООО "КСМ ПРОТЕК", Украина

Заключение: по проверенным показателям пробы Охлаждающая жидкость TEMOL Tosol A-40 соответствует требованиям ТУ У 20.5-30858281-009:2016 из.1

Гарантийный срок хранения - 5 лет со дня изготовления



Лаборант

Зав. Лаборатории

Дата выдачи паспорта 20.02.23р.

[Signature]

[Signature]

CERTIFICATE OF ANALYSIS № 82

Motor Oil PROTEC HD 15W-40

TU U 19.2-37838186-002:2012, zm.1,2

Batch № 82

API CI-4/SL

Volvo VDS-2, Renault RD-2

Manufacturing date 08.02.24

Batch net weigh 2,597t

ACEA E7, A3/B4

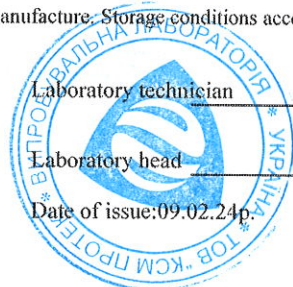
Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	12,5 - 16,3	15,29	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	120	156	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	8,5	10,25	DSTU 5094 or ISO 3771 or ASTM D2896
4	Sulfated ash, %, not lower than	1,45	1,32	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	210	217	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-27	-33	GOST 20287 or ASTM D97
7	Density at 20 °C, kg/m ³ , not more than	910	874	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	0,01	nil	DSTU GOST 6370 or ASTM D2273
9	Water content, %, not more than	nil	nil	DSTU GOST 2477 or ASTM D95
10	Calcium + magnesium in calcium weight, %, not lower than	0,28	0,382	GOST 13538 or ASTM D6443
11	Zinc weight, %, not lower than	0,09	0,111	GOST 13538 or ASTM D6443
12	Colour on colorimeter (15:85), not more than	3,0	1,5	GOST 20284 or ASTM D1500
13	Viscosity is dynamic at -20°C, cSt, not more than	7 000	6 800	GOST 1929 or ASTM D5293
14	Corrosion on plumbum plates (DK-NAMI), g/m ² , not more than	Pass	Pass	GOST 20502
15	Stabilization by inductive period of sedimentation (IPS), hours 50	Pass	Pass	DSTU GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor Oil PROTEC HD 15W-40 sample satisfies the requirement of TU U 19.2-37838186-002:2012 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture. Storage conditions according to DSTU 4454.



Laboratory technician

Laboratory head

Date of issue: 09.02.24



CERTIFICATE OF ANALYSIS № 81

Motor Oil PROTEC HD 10W-40

TU U 19.2-37838186-002:2012, zm.1,2

Batch № 81

API CI-4/SL

Volvo VDS-2, Renault RD-2

Manufacturing date 08.02.24

Batch net weigh 2,597t

ACEA E7, A3/B4

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	12,5 - 16,3	15,29	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	125	156	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	8,5	10,25	DSTU 5094 or ISO 3771 or ASTM D2896
4	Sulfated ash, %, not lower than	1,45	1,15	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	205	217	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-30	-33	GOST 20287 or ASTM D97
7	Density at 20 °C, kg/m ³ , not more than	910	874	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	0,01	nil	DSTU GOST 6370 or ASTM D2273
9	Water content, %, not more than	0,05	nil	DSTU GOST 2477 or ASTM D95
10	Calcium + magnesium in calcium weight, %, not lower than	0,28	0,382	GOST 13538 or ASTM D6443
11	Zinc weight, %, not lower than	0,09	0,111	GOST 13538 or ASTM D6443
12	Colour on colorimeter (15:85), not more than	3,0	1,5	GOST 20284 or ASTM D1500
13	Viscosity is dynamic at -25°C, cSt, not more than	7 000	6 700	GOST 1929 or ASTM D5293
14	Corrosion on plumbum plates (DK-NAMI), g/m ² , not more than	Pass	Pass	GOST 20502
15	Stabilization by inductive period of sedimentation (IPS), hours 50	Pass	Pass	DSTU GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor Oil PROTEC HD 10W-40 sample satisfies the requirement of TU U 19.2-37838186-002:2012 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture. Storage conditions according to DSTU 4454.

Laboratory technician

Laboratory head

Date of issue: 09.02.24p.

OILTECH® FLUID HIDRAULIC ANTIINGHET STEOL M

1.OBIECT

Prezenta specificatie se refera la fluidul hidraulic sintetic antiinghet typ – STEOL M, pe baza de glicerina si alcool ce permite functionarea si protectie la inghet a circuitelor pana la temperatura de -57°C .

2. DOMENIUL DE UTILIZARE

Produsul este adecvat utilizarii ca fluid de lucru in utilizari profesionale, asigurand temperaturi pana la minus 57°C. Inhibitorii de oxidare si aditivii de crestere a pH ce-i contine, confera calitati de protectie anticoroziva a otelului.

3. DOCUMENTE DE REFERINTA

GOST 5020 - Standard rusesc pentru fluid hidraulic si agent de racire.

NYCO - HYDRAUNYCOIL FH1 – Fluid hidraulic sintetic.

4.CONDITII TEHNICE DE CALITATE SI METODE DE VERIFICARE

Nr. Crt.	CARACTERISTICI	METODA DE VERIFICARE	PREVAZUT	REALIZAT TYP
1	Aspect	vizual	lichid limpede,verde inchis	lichid limpede,verde inchis
2	Densitate relativa la 15 °C	EN ISO 3675	1,09-1,11	1,10
3	Punct de congelare, °C	STAS 8671-78 pct. 4.4 ASTM D 1177	Max -57	-60
4	Punct de fierbere , °C	STAS 8671-78 pct.4.5	89-92	90
5	Reziduu la calcinare, max, %	STAS 8671-78 pct.4.6	1,8	1,8
6	pH	STAS 8671-78 pct.4.7	7,5-12,5	9
7	Viscozitatea cinematica la 40 °C, cSt	EN ISO 3104	Max 5	4,6
8	Viscozitate dinamica la 50°C , cP la-30°C ,cP	EN ISO 3104	4 – 5 Max 390	4,5 335

Preparatul are in compozitie bicromat de potasiu care este cancerigen, Carc.Cat 2. Mutagen Cat 2 Reproducere Cat 2.

In conformitate cu Directiva 76/769/CEE este interzisa consumului publicului larg.

Nu se comercializeaza publicului larg!

5. AMBALARE

Produsul este ambalat in canistre ADR de 20 litri, butoaie metalice de 200 litri.

6. TERMEN DE GARANTIE - 2 ani de la data fabricatiei, cu conditia respectarii cerintelor de depozitare si transport.

OILTECH ULEIURI HIDRAULICE ADITIVATE HL 46

1. GENERALITATI

1.1.Obiect

Uleiul hidraulic aditivat **OILTECH® HL 46**, obtinut din uleiuri de baza rafinate de natura parafinica grupa I formulat cu aditivi performanti ce confera stabilitate la oxidare, deosebita capacitate de protectie antirugina si excelente proprietati de dezemulsionare.

1.2. Domeniu de utilizare

Se foloseste la ungerea sistemelor hidrostatice si a mecanismelor de frecare cu ungere circulara in care uleiul hidraulic este solicitat la presiuni de max. 300bar.

1.3 Nivel de performanta

DIN 51524, Partea I-HL

1.4.Clasificare dupa SR ISO 6743-4

ISO-L-**HL-46** (cifra reprezinta clasa de viscozitate)

Clasificare dupa SR 871 :2001 Uleiuri minerale.Clasificare si notare

Uleiurile hidraulice aditivare **H -46 A** cifra reprezinta clasa de viscozitate

2. CONDITII DE CALITATE: ST-LBX 139 (SR 9691/94)

Nr. crt.	PROPIETATI FIZICE SI DE PERFORMANTA	OILTECH® HL 46	METODA DE ANALIZA
1	Nivel de performanta	HL 46	DIN 51524 partea I
2	Densitate relativa la 20 °C max.	0,900	EN ISO 3675
3	Viscozitate cinematica la 40°C cSt	44,4 - 49	SR ISO 3104
4	Indice de viscozitate, min.	90	ISO 2909
5	Punct de inflamabilitate COC, °C min.	205	SR EN ISO 2592
6	Punct de curgere , °C max.	-30	SR ISO 3016
CARACTERISTICI DE PERFORMANTA			
10	Actiune coroziva pe lama de cupru (3h,100 C), max	1a	SR ISO 2160
11	Timp de dezemulsionare la 54C pentru 40-37-3ml/min,max	30	STAS 56 II, ISO 6614
13	Rezistenta la presiuni ridicate pe masina cu patru bile -uzura mecanica : diametru petei de uzura la 20 daN, 100 min,1500 rot/min, mm, max	0,4	STAS 8618
14	Proprietati de spumare TS – SS , max -la 24 °C , cmc -la 93,5 °C,cmc -la 24 °C , cmc	30-0 30-0 30-0	SR ISO 6247

3. AMBALARE

Produsul este ambalat in bidoane de 1 litru, canistre de plastic de 5, 10 si 20 litri, butoaie metalice de 200 litri.

4. TERMEN DE GARANTIE- 5 ani de la data fabricatiei, cu conditia respectarii cerintelor de depozitare si transport.

PRODUS CU LICENTA SI CERTIFICAT nr. 4874 emis de R.A.R.– O.C.P.



LUBRO DOT 4

NR 16 / 07.06.2021

Lichid pentru frana si ambreiaj DOT 4

Specificatii

- ATE DOT 4
- FMVSS 116
- ISO 4925 Class 4
- SAE J 1703/ 1704

Descrierea produsului

LUBRO DOT 4 este un lichid de inalta performanta special dezvoltat pentru frane si ambreiaje. Acesta contine polietilenglicol ester, aditivi pentru a asigura protectie impotriva coroziunii si oxidarii si stabilizatori. Acest lichid de frana nu este compatibil cu lichidele de frana pe baza de uleiuri minerale.

Aplicatii

LUBRO DOT 4 este destinat utilizarii in sistemele de franare hidraulice si ambreiajele tuturor tipurilor de autovehicule de la autoturisme la camioane, autobuze si trailere, in conformitate cu instructiunile din cartile tehnice. Este compatibil si special destinat sistemelor de franare echipate cu sigilii si garnituri din cauciuc SBR (cauciuc butadien stiren) sau EPDM (cauciuc etilen propilen dien monomer).

Caracteristici tipice

Informatiile furnizate in datele tipice nu constituie o specificatie, dar aceste valori se bazeaza pe productia curenta si pot fi afectate de tolerantele admisibile de productie. Dreptul de a face modificari este rezervat ANDY MAR GRUP JUNIOR SRL

Proprietate	Metode de incercare	Valoare
Aspect	vizual	Lichid limpede, omogen
Culoare	vizual	Galben deschis
Miros	olfactiv	Caracteristic
Densitate la 20°C, g/cm ³	EN ISO 3675	1.066
Viscozitate cinematica la 20°C, mm ² /s		15.95
Viscozitate cinematica la 50°C, mm ² /s	EN ISO 3104	6.05
Viscozitate cinematica la 100°C, mm ² /s		2.2
Punct de fierbere, °C	EN ISO 3104	260
Punct de inflamabilitate, COC, °C	EN ISO 2592	144
pH	ASTM E 70	8.2
Stabilitate la temperaturi ridicate, °C	ISO 4925, s.5.4	max ± 3 , + 0.05 °C pentru fiecare grad peste 225 °C

Termen de valabilitate

Termenul de valabilitate, la stocare, in ambalajul original, in locuri uscate, este de 5 ani de la data fabricatiei.

Sanatate, Securitate, Transport si Depozitare

Lichidele de frana sunt foarte higroscopice si absorb usor umezeala din aer. Apa afecteaza puternic punctul de fierbere si calitatea lichidelor de frana. Pe baza informatiilor actuale disponibile, acest produs nu este de asteptat sa produca efecte adverse asupra sanatatii atunci cand este utilizat in scopul pentru care a fost recomandat. Va rugam sa urmati cu strictete recomandarile privind conditiile de depozitare din fisa cu date de securitate.

CERTIFICATE OF ANALYSIS № 463

Motor oil TEMOL Luxe 5W-30

TU U 23.2-30858281-007:2008 zm.1,2,3,4



Batch № 463

Manufacturing date: 29.04.21 Batch net weight: 3,75 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100oC, cSt, in range	9,3-12,5	11,33	DSTU GOST 33 or ASTM D 445
2	Viscosity Index, not lower than	130	155	DSTU GOST 25371 or ASTM D 2270
3	Total base number, mg KOH per 1 g, not lower than	7,5	8,32	DSTU 5094 or ASTM D2896 or ISO 3771
4	Sulfated ash, %, not lower than	1,5	1,0	DSTU GOST 12417 or ASTM D 874
5	Flash point (COC), °C, not lower than	195	229	DSTU GOST 4333 or ASTM D
6	Pour point, °C, not more than	-32	-34	GOST 20287 method B or ASTM D 97
7	Density at 20 °C, kg/m3, not more than	890	844	GOST 3900 or ASTM D 1298
8	Mechanical impurities content, %, not more than	nill	nill	GOST 6370 or ASTM D 2273
9	Water content, %, not more than	nill	nill	GOST 2477 or ASTM D 95
10	Phosphorus weight, %, not more than	0,12	0,092	GOST 9827 or ASTM D 4927
11	Colour on colorimeter (15:85), not more than	4,0	1,0	GOST 20284 or ASTM D 1500
12	Cold Cranking Simulatorat viscosity at -30oC, mP*s, not more than	6600	6400	p. 6.11 or GOST 1929 or ASTM D 5293
13	Corrosion on plumbum plates (DK-NAMI), g/m2, not more than	Pass	Pass	GOST 20502 method A, V. II
14	Stabilization by inductive period of sedimentation (IPS), 50 hours	Pass	Pass	GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor oil TEMOL Luxe 5W-30 sample satisfies the requirements of TU U 23.2-30858281-007:2008 zm.1,2,3,4 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 30.04.21



[Handwritten signature]

[Handwritten signature]

CERTIFICATE OF ANALYSIS № 577

Transmission oil TAD-17i

GOST 23652-79, zm. 1-8



**BUREAU
VERITAS**
ISO 9001:2015

Batch № 577

Manufacturing date: 19.10.22

Batch net weight: 15 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40°C, cSt, not lower than	17,5	20,1	DSTU GOST 33
2	Viscosity Index, not lower than	100	118	DSTU GOST 25371
3	Total acid number, mg KOH per 1 g, not more than	2,0	1,38	GOST 11362 and P.5.9
4	Flash point, °C, not lower than	200	248	DSTU GOST 4333
5	Pour point, °C, not more than	-25	-27	GOST 20287 method B
6	Ash content, %, not more than	0,3	0,24	GOST 1461
7	Mechanical impurities content, %, not more than	nil	nil	GOST 6370
8	Water content, %, not more than	0,03	nil	GOST 2477
9	Density at 20 °C, kg/m ³ , not more than	907	885	GOST 3900
10	Corrosion test during 3 hr at 100°C on steel and copper plates, point, not more than	2c	2b	GOST 2917
11	Colour on colorimeter, not more than	5,0	1,5	GOST 20284
12	Sequence I, not more than	200/0	0/0	GOST 23652 p.5.5
13	Sequence II, not more than	100/0	10/0	GOST 23652 p.5.5
14	Sequence III, not more than	200/0	0/0	GOST 23652 p.5.5
15	Four ball EP test machine (20±5°C): scuff index, N, not less than	568,4 (58)	588 (60)	GOST 9490
16	Four ball EP test machine (20±5°C): welding load, N, not less than	3687 (376)	3687 (376)	GOST 9490
17	Four ball Wear test machine (20±5°C), 392N, scar mm, not more than	0,40	0,39	GOST 9490
18	Sulfur content, %, not more than	2,5	1,30	GOST 1431

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TAD-17i sample satisfies the requirement of GOST 23652, zm. 1-8 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 21.10.22



[Signature]

[Signature]

CERTIFICATE OF ANALYSIS № 524

Transmission oil TAP-15V

GOST 23652-79, zm. 1-8



**BUREAU
VERITAS**
ISO 9001:2015

Batch № 524

Manufacturing date: 27.09.22

Batch net weight: 15 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40°C, cSt, in range	14-16	14,97	DSTU GOST 33
2	Viscosity Index, not lower than	85	138	DSTU GOST 25371
4	Flash point, °C, not lower than	185	225	DSTU GOST 4333
5	Pour point, °C, not more than	-20	-27	GOST 20287 method B
6	Ash content, %, not more than	0,3	0,24	GOST 1461
7	Mechanical impurities content, %, not more than	nil	nil	GOST 6370
8	Water content, %, not more than	0,03	nil	GOST 2477
9	Density at 20 °C, kg/m ³ , not more than	930	880	GOST 3900
10	Corrosion test during 3 hr at 100°C on steel and copper plates, point, not more than	2c	2b	GOST 2917
11	Colour on colorimeter, not more than	6,0	3,5	GOST 20284
12	Sequence I, not more than	300/0	0/0	GOST 23652 p.5.5
13	Sequence II, not more than	50/0	15/0	GOST 23652 p.5.5
14	Sequence III, not more than	300/0	0/0	GOST 23652 p.5.5
15	Four ball EP test machine (20±5°C): scuff index, N, not less than	490	499	GOST 9490
16	Four ball EP test machine (20±5°C): welding load, N, not less than	3 283	3 283	GOST 9490

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TAP-15V sample satisfies the requirement of GOST 23652, zm. 1-8 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.



[Signature]

[Signature]

CERTIFICATE OF ANALYSIS № 27

Transmission oil TEMOL ATF III

TU U 23.2-30858281-003:2004 zm.1,2,3



Batch № 27

Dexron IIIIG

Manufacturing date: 15.01.21

Batch net weight: 2,8 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Transparent red liquid	Transparent red liquid	Visually
2	Kinematic viscosity at 100°C, cSt, in range	7 - 9	7,74	DSTU GOST 33 or ASTM D445
3	Viscosity Index, not lower than	135	176	DSTU GOST 25371 or ASTM D2270
4	Flash point (COC), °C, not lower than	175	214	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-45	-46	GOST 20287, method B or ASTM D 97
6	Mechanical impurities content, %, not more than	nill	nill	GOST 6370 or ASTM D2273
7	Water content, %, not more than	nill	nill	GOST 2477 or ASTM D95
8	Density at 20 °C, kg/m3, not more than	880	847	GOST 3900 or ASTM D1298
9	Corrosion test during 3 hr at 100°C on steel and copper plates, point, not more than	2c	2a	GOST 2917 and p.5.3 or ASTM D130
10	Dynamic viscosity (-40 °C), Pa*s, not more than	20	5,2	GOST 1929 method A
11	Sequence I, not more than	70/0	0/0	DSTU 8420 or ASTM D 892
12	Sequence II, not more than	50/0	0/0	DSTU 8420 or ASTM D 892
13	Sequence III, not more than	70/0	0/0	DSTU 8420 or ASTM D 892

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TEMOL ATF III sample satisfies the requirement of TU U 23.2-30858281-003:2004 zm.1,2,3 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 18.01.21



[Handwritten signatures]

CERTIFICATE OF ANALYSIS № 288

Motor oil TEMOL Universal (M-8B)

TU U 23.2-30858281-007:2008 zm.1,2,3,4

Batch № 288

SAE 20

API SD/SB

Manufacturing date: 22.03.21

Batch net weight: 5,0 l

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	6-9	8,10	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	90	104	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	4,0	4,87	DSTU 5094 or ASTM D2896 or ISO 3771
4	Sulfated ash, %, not lower than	1,10	0,72	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	207	239	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-25	-30	GOST 20287 method B or ASTM D97
7	Density at 20 °C, kg/m3, not more than	905	876	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	0,015	0,010	GOST 6370 or ASTM D2273
9	Water content, %, not more than	0,03	nil	GOST 2477 or ASTM D95
10	Active elements content, Ca+Mg (counted by Ca) %, not lower than	0,12	0,16	GOST 13538 or ASTM D4927
11	Colour on colorimeter (15:85), not more than	3,5	1,5	GOST 20284 or ASTM D1500
12	Corrosion on plumbum plates (DK-NAMI), g/m2, not more than	10	7,2	GOST 20502 method A, var. II
13	Stabilization by inductive period of sedimentation (IPS), 30 hours	Pass	Pass	GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor oil TEMOL Universal (M-8B) satisfies the requirement of TU U 23.2-30858281-007:2008 zm.1,2,3,4 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture



[Handwritten signature]

CERTIFICATE OF ANALYSIS № 534

Motor oil M-10G2K

GOST 8581-78 zm.1-10



Batch № 534

Manufacturing date: 13.07.23 Batch net weight: 15 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	10,5-11,5	11,18	DSTU GOST 33
2	Viscosity Index, not lower than	85	135	DSTU GOST 25371
3	Total base number, mg KOH per 1 g, not lower than	6	6,65	GOST 11362
4	Sulfated ash, %, not lower than	1,15	0,9	GOST 12417
5	Flash point (COC), °C, not lower than	210	240	DSTU GOST 4333
6	Pour point, °C, not more than	-15	-23	GOST 20287 method B
7	Density at 20 °C, kg/m ³ , not more than	905	875	GOST 3900
8	Mechanical impurities content, %, not more than	0,015	0,011	GOST 6370
9	Water content, %, not more than	0,03	nil	GOST 2477
10	Calcium weight, %, not lower than	0,19	0,255	GOST 13538
11	Zinc weight, %, not lower than	0,05	0,065	GOST 13538
12	Phosphorus weight, %, not lower than	0,05	0,054	GOST 9827
13	Purity mg per 100 g of oil, not more than	500	380	GOST 12275
14	The power to establish PZV, point, not more than	0,5	0,5	GOST 5726
11	Colour on colorimeter (15:85), not more than	4,0	1,5	GOST 20284
12	Corrosion on plumbum plates (DK-NAMI), g/m ² , not more than	nil	nil	GOST 20502
13	Stabilization by inductive period of sedimentation (IPS), 50 hours	Pass	Pass	GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor oil M-10G2K sample satisfies the requirement of GOST 8581-78 zm.1-10 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture



Laboratory head

Date of issue: 17.07.23



Mercedes-Benz AG | 70546 Stuttgart

Mercedes-Benz

KSM Protec Ltd.
1, Voroshilova Str.
07850 Klavdievo-Tarasovo, Kiev Region
UKRAINE

T/P +49 711 17 24801
T/F +49 711 17 59756

Ihr Zeichen, Ihre Nachricht vom/
Your reference
04.12.2019

Unser Zeichen, unsere Nachricht vom/
Our reference number
RD/PMI-125425

Date
25.06.2020

MB-Approval Certificate - New Approval - Engine Oil
MB-Approval 228.51 for: „PROTEC Headway MS 10W-40“
Oil-Code: LBB 15356-O, SAE-Grade: 10W-40

Reblend to LBB 15356-O with Oil-Code: LBB 15356-O
Upstream supplier: AFTON Chemical Ltd

Dear Sir or Madam,

The aforementioned operating fluid complies with the requirements of the Mercedes-Benz Specifications for Operating Fluids, sheet 228.51 and is therefore approved for the respective Mercedes-Benz vehicles and assemblies. The application range is shown on the MB sheet and further defined on the sheet 223.2. Further requirements, e.g. SAE grades, capacities, change intervals etc. must also be observed.

The following regulations apply for the MB-Approval:

- The MB-Approval comes into force on the date shown on this certificate
- The MB-Approval will expire in 5 years at the latest
- The MB-Approval automatically terminates on expiry of the validity period at the latest
- The MB-Approval is only valid as long as the product name is listed in MB BeVo-ONLINE
<http://bevo.mercedes-benz.com>
- Applications for renewals or new approvals etc. must be made in good time
- In addition, the regulations laid down in the current “Obligations Regarding Approval for Operating Fluids” contract apply.

A 2-liter back-up sample of each formulation, which can be called upon by Mercedes-Benz AG at any given moment, must be retained for at least 3 years. We will inform you of the dispatch address.

Sincerely
Mercedes-Benz AG

i.V. Ralf Krukenberg

i.V. Dr. Jochen Betsch

Mercedes-Benz AG | 70546 Stuttgart | T/P +49 711 17 0 | T/F +49 711 17 2 22 44 | dialog.mb@daimler.com | www.mercedes-benz.com

Mercedes-Benz AG, Stuttgart, Germany | Sitz und Registergericht/Domicile and Court of Registry: Stuttgart, HBR-Nr./Commercial Register No.: 76 2873
Vorsitzender des Aufsichtsrats/Chairman of the Supervisory Board: Manfred Bischoff
Vorstand/Board of Management: Ola Källenius, Vorsitzender/Chairman; Jörg Burzer, Renata Jungo Brüngger, Sajjad Khan, Sabine Kohleisen, Frank Lindenberg, Markus Schäfer, Britta Seeger



und Mercedes-Benz sind eingetragene Marken der Daimler AG, Stuttgart, Deutschland/ are registered trademarks of Daimler AG, Stuttgart, Germany.