

CERTIFICATE OF ANALYSIS № 358

ОІІ PROTEC IG-40

TU U 19.2-37838186-005:2012 zm.1,2



Batch № 358

Manufacturing date: 22.05.23

Batch net weight: 16 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40oC, cSt, in range	51-75	62,71	DSTU GOST 33 or ASTM D445
2	Total acid number, mg KOH per 1 g, not more than	0,07	0,011	GOST 11362 and P.7.6
3	Flash point, °C, not lower than	200	231	DSTU GOST 4333 or ASTM D92
4	Pour point, °C, not more than	-10	-18	GOST 20287 method B or ASTM D97
5	Mechanical impurities content, %, not more than	0,015	nil	GOST 6370 or ASTM D2273
6	Water content, %, not more than	0,03	0,03	GOST 2477 or ASTM D95
7	Density at 20 °C, kg/m3, not more than	910	862	GOST 3900 or ASTM D1298
8	Oxidation stability: acid number, mр KOH/г, not more than	0,4	0,29	DSTU GOST 18136 (GOST 18136)
9	Oxidation stability: increase in resins, %, not more than	3	1,15	DSTU GOST 18136 (GOST 18136)
10	Sulfur weight, %, not more than	1,3	0,23	GOST 1437 or ASTM D4927
11	Colour on colorimeter, not more than	4,0	1,0	GOST 20284 or ASTM D1500

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Oil PROTEC IG-40 sample satisfies the requirements of TU U 19.2-37838186-005:2012 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture

Laboratory technician

Laboratory head

Date of issue: 23.05.23



CERTIFICATE OF ANALYSIS № 416

Hydraulic oil PROTEC HYDROIL MGE-46V

TU U 19.2-37838186-005:2012 zm.1,2



Batch № 416

Manufacturing date: 07.06.23

Batch net weight: 18 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40oC, cSt, in range	41,4-50,6	45,88	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	90	101	DSTU GOST 25371 or ASTM D2270
3	Total acid number, mg KOH per 1 g, not more than	1,5	0,82	GOST 11362 and P.7.6
4	Flash point, °C, not lower than	190	235	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-32	-32	GOST 20287 method B or ASTM D97
6	Mechanical impurities content, %, not more than	nil	nil	GOST 6370 or ASTM D2273
7	Water content, %, not more than	nil	nil	GOST 2477 or ASTM D95
8	Density at 20 °C, kg/m3, not more than	890	872	GOST 3900 or ASTM D1298
10	Corrosion test on steel plates	Pass	Pass	GOST 2917 and P.7.4
12	Sequence I, not more than	150/0	0/0	DSTU 8420 or ASTM D 892
13	Sequence II, not more than	100/0	50/0	DSTU 8420 or ASTM D 892
14	Sequence III, not more than	150/0	0/0	DSTU 8420 or ASTM D 892
15	Four ball Wear test machine (20±5°C), 196N, scar mm, not more than	0,45	0,39	GOST 9490 or ASTM
16	Colour on colorimeter, not more than	4,0	1,0	GOST 20284 or ASTM D1500

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Hydraulic oil PROTEC HYDROIL MGE-46V sample satisfies the requirement of TU U 19.2-37838186-005:2012 zm.1,2 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 08.06.23



CERTIFICATE OF ANALYSIS № 27

Transmission oil TEMOL ATF III

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



Batch № 27

Dexron III G

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 100oC, 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 oC), 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

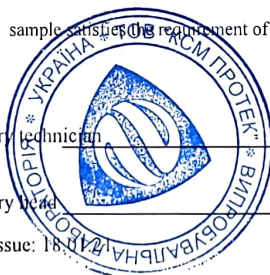
Conclusion: Transmission oil TEMOL ATF III sample satisfies the requirement of TU U 23.2-30858281-003:2004 zm.1,2,3 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 18.01.21



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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 100oC, 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/m3, 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/m2, 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 Technika

Date of issue: 17.07.23

CERTIFICATE OF ANALYSIS № 532

Motor oil TEMOL Turbo Diesel (M-10DM)

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

Batch №532

SAE 30

API CD

Manufacturing date 21.05.22

Batch net weight: 18,5 t

Product Characteristics

No	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	9,3-12,5	12,18	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	90	94	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	8,2	9,84	DSTU 5094 or ASTM D2896 or ISO 3771
4	Sulfated ash, %, not lower than	1,50	1,26	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	220	242	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-18	-21	GOST 20287 method B or ASTM D97
7	Density at 20 °C, kg/m ³ , not more than	905	892	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	0,025	0,018	GOST 6370 or ASTM D2273
9	Water content, %, not more than	0,03	0,03	GOST 2477 or ASTM D95
10	Active elements content, Ca+Mg (counted by Ca) %, not lower than	0,12	0,32	GOST 13538 or ASTM D4927
11	Colour on colorimeter (15.85), not more than	3,5	2,0	GOST 20284 or ASTM D1500
12	Corrosion on plumbum plates (DK-NAMI), g/m ² , not more than	Pass	Pass	GOST 20502 method A, var. II
13	Stabilization by inductive period of sedimentation (IPS), 60 hours	Pass	Pass	GOST 11063

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Motor oil TEMOL Turbo Diesel (M-10DM) sample 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.



Laboratory technician

Laboratory head

Date of issue: 22.05.22



CERTIFICATE OF ANALYSIS № 448

Transmission oil TAD-17i

GOST 23652-79, zm. 1-8



BUREAU
VERITAS
ISO 9001:2015

Batch № 448

Manufacturing date: 25.08.22

Batch net weight: 7,5 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40oC, cSt, not lower than	17,5	22,37	DSTU GOST 33
2	Viscosity Index, not lower than	100	146	DSTU GOST 25371
3	Total acid number, mg KOH per 1 g, not more than	2,0	1,43	GOST 11362 and P.5.9
4	Flash point, °C, not lower than	200	216	DSTU GOST 4333
5	Pour point, °C, not more than	-25	-26	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/m3, not more than	907	887	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	3,0	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	1,09	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 manufacturing



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CERTIFICATE OF ANALYSIS № 596

Transmission Oil PROTEC Nigrol L

TU U 19.2-37838186-003:2012 zm.1



Batch № 596

Manufacturing date: 07.08.23

Batch net weight: 8,25 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100oC, cSt, in range	27,0 - 34,0	29,81	DSTU GOST 33 or ASTM D445
2	Flash point, °C, not lower than	180	189	DSTU GOST 4333 or ASTM D92
3	Pour point, °C, not more than	-5	-12	GOST 20287 method B or ASTM D97
4	Water content, %, not more than	1,0	1,0	GOST 2477 or ASTM D95
5	Density at 20 °C, kg/m ³ , not more than	970	863	GOST 3900 or ASTM D1298
6	Corrosion test during 3 hr at 100°C on steel and copper plates	pass	pass	GOST 2917 and p.7.4 or ASTM D130
7*	Rubber compatibility (volume change) for UIM-1, %, in range	+1,0 - +6,0	+4,0	GOST 9.030 and p.7.5

Manufactured by KSM PROTEC LLC

Conclusion: transmission oil PROTEC Nigrol L sample satisfies the requirement of TU U 19.2-37838186-003:2012 zm.1 standard based on characteristics analyzed.

Laboratory technician

Laboratory head

Date of issue: 07.08.23



CERTIFICATE OF ANALYSIS № 216
Transmission oil TEMOL Luxe Gear 85W-140
 TU U 23.2-30858281-003:2004 zm.1,2,3



Batch № 216

Manufacturing date: 28.02.20 Batch net weight: 1,1 t API GL-5

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100oC, cSt, in range	24,0 - 32,5	30,94	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	90	115	DSTU GOST 25371 or ASTM D2270
3	Flash point (COC), °C, not lower than	215	245	DSTU GOST 4333 or ASTM D92
4	Pour point, °C, not more than	-15	-25	GOST 20287, method B or ASTM D97
5	Density at 20 °C, kg/m3, not more than	910	895	GOST 3900 or ASTM D1298
6	Mechanical impurities content, %, not more than	nil	nil	GOST 6370 or ASTM D2273
7	Water content, %, not more than	nil	nil	GOST 2477 or ASTM D95
8	Colour on colorimeter CNT, not more than	6,0	4,5	GOST 20284 or ASTM D1500
9	Corrosion test during 3 hr at 120°C on copper plates, point, not more than	2c	1c	GOST 2917 and p.7.4 or ASTM D130
10	Sequence I, not more than	100/0	10/0	DSTU 8420 or ASTM D 892
11	Sequence II, not more than	50/0	30/0	DSTU 8420 or ASTM D 892
12	Sequence III, not more than	50/0	10/0	DSTU 8420 or ASTM D 892
13	Four ball EP test machine (20±5°C): scuff index, N, not less than	490	568	GOST 9490 or ASTM D 2783
14	Four ball EP test machine (20±5°C): welding load, N, not less than	3 283	3 685	GOST 9490 or ASTM D 2783
15	Cold Cranking Simulatorat viscosity at -18oC, P*s, not more than	150	125	GOST 1929 method A

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TEMOL Luxe Gear 85W-140 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: 02.03.20





Batch № 110

Manufacturing date: 04.05.23

Batch net weight: 4,476 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Uniform grease with color between light-yellow and brown	Uniform grease with yellow color*	P. 7.2
2	Dropping point, °C, not lower than	185	208	GOST 6793
3	Penetration at 25°C, 0,1 mm, in range	220 - 250	245	GOST 5346, method V
4*	Viscosity at -20°C and velocity gradient of 10 s ⁻¹ , Pa*s (P), not more than	650 (6500)	612 (6120)	GOST 7163
5*	Viscosity at 0°C and velocity gradient of 10 s ⁻¹ , Pa*s (P), not more than	280 (2800)	214 (2140)	GOST 7163
6*	Viscosity at 50°C and velocity gradient of 100 s ⁻¹ , Pa*s (P), not less than	8,0 (80)	10,9 (109)	GOST 7163
7	Shear stability at 20°C, Pa (gs/cm ²), in range	500 (5,0) - 1 000 (10,0)	686 (6,86)	GOST 7143, method B
8	Shear stability at 80°C, Pa (gs/cm ²), not lower than	200 (2,0)	289 (2,89)	GOST 7143, method B
9	Colloid stability, %, of separated oil, not more than	12,0	11,14	GOST 7142
10	Metal corrosion	Pass	Pass	GOST 9.080 and P. 7.3
11	Vaporability at 120 °C, %, not more than	6,0	1,0	GOST 9566
12	Free alkali content NaOH, %, not more than	0,1	0,06	GOST 6707
13	Water content	nil	nil	GOST 2477 and P. 7.4
14	Mechanical impurities content, %, not more than	0,03	nil	GOST 6479 and P. 7.5
15	Four ball EP test machine (20±5°C): scuff index, N (kgs), not less than	274 (28)	323 (33)	GOST 9490
16	Four ball EP test machine (20±5°C): welding load, N (kgs), not less than	1381 (141)	1568 (160)	GOST 9490
17	Four ball EP test machine (20±5°C): critical load, N (kgs), not less than	617 (63)	735 (75)	GOST 9490
18*	Elastomer of grade 26-44, %: volume change	±8	-1,8	GOST 9.030 and P. 7.6
19*	Elastomer of grade 26-44, %: hardness change	±8	-3,4	GOST 9.030 and P. 7.6

*As agreed by the parties

Manufactured by KSM PROTEC LLC

Conclusion: Litol-24 Lubricating Grease lubricating grease sample satisfies the requirement of DSTU GOST 21150:2019 standard based on characteristics analysis.

Laboratory technician

Laboratory head

Date of issue: 05.05.23



CERTIFICATE OF ANALYSIS № 23

Antifreeze TEMOL Tosol A-40

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



Batch № 23

Manufacturing date: 26.04.23 Batch net weight: 2,15 т

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Uniform transparent liquid without mechanical impurities. Color must refer to sample's color	Uniform transparent liquid without mechanical impurities with blue color	p.8.4
2	Density at 20 °C, kg/m3, not lower than	1,065	1,073	DSTU 7261
3	Temperature of crystallization start, °C, not more than	-38	-39	p.8.5
4	Fractional content: temperature of distillation start, °C, not lower than	100	105	p.8.6
5	Fractional content: mass fraction of liquid, that distills before 150 °C, %, not more than	55	46	p.8.6
6	Corrosive affect on metals, g/m ² *day, not more: copper, brass, steel, cast iron, aluminum	0,30	0,092	p.8.7
7	Corrosive affect on metals, g/m ² *day, not more: solder	0,50	0,106	p.8.7
8	Foam formation: foam's volume, cm ³ , not more than	50	40	p.8.8 or ASTM D1881
9	Foam formation: foam's stability, sec, not more than	5	2	p.8.8 or ASTM D1881
10	Rubber's volume increase, %, not more than	5	1,5	p.8.9
11	pH value at 20°C, in range	7,5 - 11	9,18	p.8.10 or ASTM D1287
12	Alkalinity, cm ³ , not lower	2,0	19,14	p.8.11 or ASTM D1121

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Antifreeze TEMOL Tosol A-40 sample satisfies the requirement of TU U 20.5-30858281-009:2016 zm.1 standard based on characteristics analyzed.



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CERTIFICATE OF ANALYSIS № 455

ОМ TEMOL Scooter 2T

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



Batch № 455

SAE 20

Manufacturing date: 28.04.21

Batch net weight: 2,65 t

API TC

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	6-12	9,63	DSTU GOST 33 or ASTM D445
2	Total base number, mg KOH per 1 g, not lower than	1,0	1,25	DSTU 5094 or SATM D2896 or ISO 3771
3	Sulfated ash, %, not more than	0,4	0,13	DSTU GOST 12417 or ASTM
4	Flash point (COC), °C, not lower than	205	240	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-15	-25	GOST 20287 method B or ASTM D97
6	Mechanical impurities content, %, not more than	0,015	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/m ³ , not more than	900	892	GOST 3900 or ASTM D1298
9	Corrosion test	Pass	Pass	GOST 2917 and P.6.12 or ASTM D130

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Oil TEMOL Scooter 2T sample 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.

Laboratory technician

Laboratory head

Date of issue: 29.04.21



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