

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	nil	nil	GOST 6370 or ASTM D 2273
9	Water content, %, not more than	nil	nil	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



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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





CERTIFICATE OF ANALYSIS № 524

Transmission oil TAP-15V

GOST 23652-79, zm. 1-8



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 40oC, 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/m3, 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.



Laboratory technician

Laboratory head

Date of issue: 29.09.22

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CERTIFICATE OF ANALYSIS № 27

Transmission oil TEMOL ATF III

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



Batch № 27

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Manufacturing date: 15.01.21 Batch net weight: 2,8 t

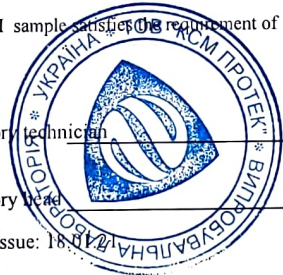
Product Characteristics

№	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	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	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

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 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100oC, 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) fully 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



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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 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 requirements of GOST 8581-78 zm.1-10 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture



Date of issue: 17.07.23

CERTIFICATE OF ANALYSIS № 502

Oil PROTEC IG-20

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



Batch № 502

Manufacturing date: 03.08.22

Batch net weight: 18 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40°C, cSt, in range	25-35	31,53	DSTU GOST 33 or ASTM D445
2	Total acid number, mg KOH per 1 g, not more than	0,05	0,022	GOST 11362 and P.7.6
3	Flash point, °C, not lower than	180	222	DSTU GOST 4333 or ASTM D92
4	Pour point, °C, not more than	-10	-15	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	nil	GOST 2477 or ASTM D95
7	Density at 20 °C, kg/m ³ , not more than	910	869	GOST 3900 or ASTM D1298
8	Oxidation stability: acid number, mg KOH/g, not more than	0,3	0,23	DSTU GOST 18136 (GOST 18136)
9	Oxidation stability: increase in resins, %, not more than	3	1,75	DSTU GOST 18136 (GOST 18136)
10	Sulfur weight, %, not more than	1,3	0,36	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-20 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.



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CERTIFICATE OF ANALYSIS № 926

Oil PROTEC IG-40

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



Batch № 926

Manufacturing date: 28.08.21

Batch net weight: 18 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40oC, cSt, in range	51-75	62,24	DSTU GOST 33 or ASTM D445
2	Total acid number, mg KOH per 1 g, not more than	0,1	0,0	GOST 11362 and P.7.6
3	Flash point, °C, not lower than	200	239	DSTU GOST 4333 or ASTM D92
4	Pour point, °C, not more than	-10	-15	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	892	GOST 3900 or ASTM D1298
8	Oxidation stability: acid number, мг 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	DSTU GOST 18136 (GOST 18136)
10	Sulfur weight, %, not more than	1,3	1,23	GOST 1437 or ASTM D4927
11	Colour on colorimeter, not more than	4,0	2,0	GOST 20284 or ASTM D1500

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Oil PROTEC IG-40 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: 30.08.21