

CERTIFICATE OF ANALYSIS № 727

Hydraulic oil PROTEC HYDROIL HM 46

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

Batch № 727

ISO 11158 HM

DIN 51524 HLP

ISO VG 46

Manufacturing date: 04.10.24

Batch net weight: 2,65 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40°C, cSt, in range	41,4-50,6	47,17	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	95	104	DSTU GOST 25371 or ASTM D2270
3	Total acid number, mg KOH per 1 g, not more than	2,0	0,57	GOST 11362 and P.7.6
4	Flash point, °C, not lower than	210	235	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-30	-35	GOST 20287 method B or ASTM D97
6	Mechanical impurities content, %, not more than	nil	nil	GOST 6370 or ASTM
7	Water content, %, not more than	nil	nil	GOST 2477 or ASTM D95
8	Density at 20 °C, kg/m ³ , not more than	910	870	GOST 3900 or ASTM D1298
9	Ash content %, not more than	0,3	0,14	GOST 1461 or ASTM D 482
10	Corrosion test on steel plates	Pass	Pass	GOST 2917 and P.7.4
11	Rubber compatibility (72 h, 130 °C) mass change for UIM-1, %, not more than	7,5	3,0	GOST 9.030 method A
12	Sequence I, not more than	150/0	0/0	DSTU 8420 or ASTM D 892
13	Sequence II, not more than	100/0	30/0	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	0,29	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 HM 46 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: 07.10.24



CERTIFICATE OF ANALYSIS № 725

Hydraulic oil PROTEC HYDROIL HM 32

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



Batch № 725

ISO 11158 HM

DIN 51524 HLP

ISO VG 32

Manufacturing date: 02.10.23

Batch net weight: 2,55 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40oC, cSt, in range	28,8-35,2	32,72	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	95	107	DSTU GOST 25371 or ASTM D2270
3	Total acid number, mg KOH per 1 g, not more than	2,0	0,58	GOST 11362 and P.7.6
4	Flash point, °C, not lower than	195	215	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-30	-32	GOST 20287 method B or ASTM D97
6	Mechanical impurities content, %, not more than	nil	nil	GOST 6370 or ASTM
7	Water content, %, not more than	nil	nil	GOST 2477 or ASTM D95
8	Density at 20 °C, kg/m3, not more than	910	870	GOST 3900 or ASTM D1298
9	Ash content, %, not more than	0,3	0,14	GOST 4161 or ASTM D 482
10	Corrosion test on steel plates	Pass	Pass	GOST 2917 and P.7.4
11	Rubber compatibility (72 h, 130 oC) mass change for UIM-1, %, not more than	7,5	3,0	GOST 9.030 method A
12	Sequence I, not more than	150/0	0/0	DSTU 8420 or ASTM D 892
13	Sequence II, not more than	100/0	40/0	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	0,50	0,3	GOST 9490 or ASTM
16	Colour on colorimeter, not more than	3,5	1,0	GOST 20284 or ASTM D1500

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Hydraulic oil PROTEC HYDROIL HM 32 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: 03.10.23



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.



Date: 11/15/2023 07:23

[Handwritten signature]

CERTIFICATE OF ANALYSIS № 212

Transmission oil TEp-15

GOST 23652-79 zm. 1-8



Batch № 212

SAE 90

GL-2

Manufacturing date 22.02.22

Batch net weight: 1,65 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	14-16	14,98	DSTU GOST 33
2	Flash point, °C, not lower than	185	240	DSTU GOST 4333
3	Pour point, °C, not more than	-18	-24	GOST 20287 method B
4	Ash content, %, not lower than	0,3	0,35	GOST 1461
5	Mechanical impurities content, %, not more than	0,03	0,01	GOST 6370 and p.5.6
6	Water content, %, not more than	0,03	nil	GOST 2477
7	Density at 20 °C, g/sm3, not more than	0,95	0,876	GOST 3900
8	Thermo-oxidative stability DK-NAMI(T=140°C,20 hr):sediment in petroleum ether,%,not more than	0,7	0,28	GOST 11063 and p.5.4.2
9	Thermo-oxidative stability DK-NAMI(T=140°C,20 hr),%viscosity increase T=100°C,not more than	0,25	0,14	GOST 11063 and p.5.4.2
10	Presence of water-soluble acids and alkalis	nil	nil	GOST 6307
11	Cold Cranking Simulatorat viscosity at -15°C, mP*s, not more than	200(2000)	190(1900)	GOST 1929
12	Corrosion test during 3 hr at 100°C on steel and copper plates	pass	pass	GOST 2917 and p.5.2
13	Phosphorus weight, %, not lower than	0,06	0,068	GOST 9827
14	Rubber compatibility (volume change) for UIM-1, %, in range	4-10	7	GOST 9.030 method A
15	Four ball Wear test machine (20±5°C), 392N, scar mm, not more than	0,55	0,48	GOST 9490
16	Sulfur content, %, not more than	3,0	1,00	GOST 1431 or GOST 1437

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TEp-15 sample satisfies the requirement of GOST 23652-79 zm. 1-8 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture



[Signature]

[Signature]

CERTIFICATE OF ANALYSIS № 625

Transmission oil TEMOL ATF II

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

Batch № 625

DEXRON IID

Manufacturing date: 02.09.24 Batch net weight: 2,7 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Transparent red oil	Transparent red oil liquid	Visually
2	Kinematic viscosity at 100oC, cSt, in range	6,8-7,8	7,12	DSTU GOST 33 or ASTM D445
3	Viscosity Index, not lower than	130	173	DSTU GOST 25371 or ASTM D2270
4	Flash point (COC), °C, not lower than	175	207	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-40	-46	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	880	846	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	14	5,6	GOST 1929 method A
11	Sequence I, not more than	70/0	0/0	ASTM D892 or DSTU 8420
12	Sequence II, not more than	50/0	0/0	ASTM D892 or DSTU 8420
13	Sequence III, not more than	70/0	0/0	ASTM D892 or DSTU 8420

Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Transmission oil TEMOL ATF II sample satisfies the requirements 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: 03.09.24



CERTIFICATE OF ANALYSIS № 126

Motor oil TEMOL Luxe 10W-40

TU U 19.2-37838186-029:2023

Batch № 126

API SL/CF

Manufacturing date: 23.02.24 Batch net weight: 4,5 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100oC, cSt, in range	12,5 - 16,3	14,46	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	130	145	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	6,5	7,53	DSTU 3094 or ISO 3771 or ASTM D2896
4	Sulfated ash, %, not lower than	1,5	1,25	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	200	236	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-32	-32	GOST 20287 method B or ASTM D97
7	Density at 20 °C, kg/m3, not more than	905	865	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	0,015	Nil	GOST 6370 or ASTM D2273
9	Water content, %, not more than	0,03	Nil	GOST 2477 or ASTM D95
10	Phosphorus weight, %, not more than	0,12	0,098	GOST 2987 or ASTM D4927
11	Colour on colorimeter (15:85), not more than	4,5	1,0	GOST 20284 or ASTM D1500
12	Cold Cranking Simulator viscosity at -25oC, mP*s, not more than	7000	6750	GOST 1929 or p.6.11 or ASTM D5293
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 10W-40 sample satisfies the requirement of TU U 19.2-37838186-029:2023 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.



Laboratory technician

Laboratory head

Date of issue: 26.02.24



[Handwritten signature]

CERTIFICATE OF ANALYSIS № 705

Motor oil M-10G2K

GOST 8581-78 zm.1-10

Batch № 705

Manufacturing date: 26.09.24 Batch net weight: 12 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	10,5-11,5	10,65	DSTU GOST 33
2	Viscosity Index, not lower than	85	132	DSTU GOST 25371
3	Total base number, mg KOH per 1 g, not lower than	6	6,42	GOST 11362
4	Sulfated ash, %, not lower than	1,15	0,9	GOST 12417
5	Flash point (COC), °C, not lower than	220	222	DSTU GOST 4333
6	Pour point, °C, not more than	-18	-25	GOST 20287 method B
7	Density at 20 °C, kg/m3, not more than	900	874	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	0,245	GOST 13538
11	Zinc weight, %, not lower than	0,05	0,054	GOST 13538
12	Phosphorus weight, %, not lower than	0,05	0,05	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	3,0	1,5	GOST 20284
12	Corrosion on plumbum plates (DK-NAM1), 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 technician

Laboratory head

Date of issue: 27.09.24



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 100°C, 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 -30°C, 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 signatures]

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

№	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/m3, 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/m2, 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



(Handwritten signatures)

CERTIFICATE OF ANALYSIS № 421

Motor oil PROTEC MD+ 15W-40

TU U 19 2-37838186-002.2012 зм.1-3



Batch № 421

Manufacturing date: 08.06.23

API CI-4/SL

MB 228.3, Cummins CES 20078

Batch net weight: 2,55 t

ACEA E7, A3/B4

MAN M3275, Volvo VDS-3

Caterpillar ECF-1a

Renault RLD-2, Mack EO-N

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 100°C, cSt, in range	12,5-16,3	15,48	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	125	142	DSTU GOST 25371 or ASTM D2270
3	Total base number, mg KOH per 1 g, not lower than	9,0	11,21	DSTU 5094 or p.7.4 or ISO 3771
4	Sulfated ash, %, not lower than	1,45	1,45	DSTU GOST 12417 or ASTM D874
5	Flash point (COC), °C, not lower than	205	229	DSTU GOST 4333 or ASTM D92
6	Pour point, °C, not more than	-28	-30	GOST 20287 method B or ASTM D97
7	Density at 20 °C, kg/m³, not more than	910	869	GOST 3900 or ASTM D1298
8	Mechanical impurities content, %, not more than	nil	nil	GOST 6370 or ASTM D2723
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	0,3	0,33	GOST 13538 or ASTM D6443
11	Zinc weight, %, not lower than	0,09	0,1	GOST 13538 or ASTM D6443
12	Colour on colorimeter (15.85), not more than	4,0	1,5	GOST 20284 or ASTM D1500
13	Dynamic viscosity at -20°C, mPa·s, not more than	7 000	5 300	GOST 1929 or p.7.5 or ASTM D5593
14	Corrosion on plumbum plates (DK-NAM), g/m², not more than	Pass	Pass	GOST 20502 method A v. II
15	Stabilization by inductive period of sedimentation (IPS), 50 hours	Pass	Pass	GOST 11063



Manufactured by KSM PROTEC LLC, Ukraine
 Conclusion: Motor oil PROTEC MD+ 15W-40 sample satisfies the requirement of TU U 19 2-37838186-002.2012 зм.1-3 standard based on characteristics and units

[Signature]

[Signature]

Лабораторія

Додаток

Date of issue: 09.06.23

CERTIFICATE OF ANALYSIS № 372

Solidol Zhirovoi Lubricating Grease

GOST 1033-79 zm. 1,2,3

Batch № 372

Manufacturing date: 17.10.24

Batch net weight: 2,48 t

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Uniform grease with color between light-yellow and dark-brown	Uniform grease with light-yellow color*	P.4.2 of GOST 1033
2	Dropping point, °C, not lower than	78	98	GOST 6793
3	Penetration at 25°C, 0,1 mm	230 - 290	290	GOST 5346, method V
4	Viscosity at 0°C and velocity gradient of 10 s ⁻¹ , Pa*s, not more than	250 (2500)	235 (2350)	GOST 7163
5	Shear stability at 50°C, Pa, not lower than	196 (2,0)	260 (2,65)	GOST 7143
6	Free organic acids content, not more than	nil	nil	GOST 6707
7	Water content, %, not more than	2,5	1,6	GOST 2477
8	Mechanical impurities insoluble in hydrochloric acid content	nil	nil	GOST 6479
9	Calcium soaps of fatty acids conter, %, not less than	11,0	13,1	GOST 5211
10	Free alkali content NaOH, %, not more than	0,2	0,03	GOST 6707

* As agreed by the parties

Manufactured by KSM PROTEC LLC

Conclusion: **Solidol Zhirovoi** lubricating grease sample satisfies the requirement of GOST 1033-79 zm. 1,2,3 standard based on characteristics analyzed.

Laboratory technician

Laboratory head

Date of issue: 18.10.24



Batch № 307

Manufacturing date: 28.08.24

Batch net weight: 3,6 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 light-brown color*	P. 7.2
2	Dropping point, °C, not lower than	185	204	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/cm2), in range	500 (5,0) - 1 000 (10,0)	686 (6,86)	GOST 7143, method B
8	Shear stability at 80°C, Pa (gs/cm2), not lower than	200 (2,0)	230 (2,3)	GOST 7143, method B
9	Colloid stability, % of separated oil, not more than	12,0	11,32	GOST 7142
10	Metal corrosion	Pass	Pass	GOST 9080 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	0,03	GOST 6707
13	Water content	Absent	Absent	GOST 2477 and P. 7.4
14	Mechanical impurities content, %, not more than	0,03	Absent	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 analyzed.

Laboratory technician

Laboratory head

Date of issue: 29.08.24



Antifreeze TEMOL Tosol A-40

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

Batch № 80

Manufacturing date: 13.09.24 Batch net weight: 6,93 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.7.4
2	Density at 20 °C, kg/m ³ , not lower than	1,065	1,075	DSTU 7261
3	Temperature of crystallization start, °C, not more than	-38	-38	p.7.5
4	Fractional content: temperature of distillation start, °C, not lower than	100	105	p.7.6
5	Fractional content: mass fraction of liquid, that distills before 150 °C, %, not more than	55	46	p.7.6
6	Corrosive affect on metals, g/m ² *day, not more: copper, brass, steel, cast iron, aluminum	0,30	0,092	p.7.7
7	Corrosive affect on metals, g/m ² *day, not more: solder	0,50	0,106	p.7.7
8	Foam formation: foam's volume, cm ³ , not more than	50	40	p.7.8 or ASTM D1881
9	Foam formation: foam's stability, sec, not more than	5	2	p.7.8 or ASTM D1881
10	pH value at 20°C, in range	7,5 - 11	8,72	DSTU 2207.1 and. P.7.10 or ASTM D1287 and. P.7.10
11	Alkalinity, cm ³ , not lower	2,0	19,73	p.8.11 or ASTM D1121

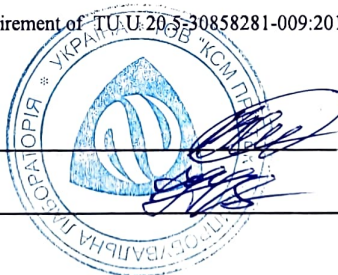
Manufactured by KSM PROTEC LLC, Ukraine

Conclusion: Antifreeze TEMOL Tosol A-40 sample satisfies the requirement of TU U 20.5-30858281-009:2016 zm.1,2 standard based on characteristics analyzed.

Laboratory technic _____

Laboratory head _____

Date of issue: 16.09.24



CERTIFICATE OF ANALYSIS № 87

TEMOL Antifreeze Luxe G12 Red

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

Batch № 87

Manufacturing date: 25.09.24 Batch net weight: 15,12 l

Product Characteristics

№	Characteristics and units	Standard limits	Actual	Test method
1	Appearance	Homogeneous transparent liquid without mechanical impurities. Color should match the color of the sample-standard	Homogeneous transparent liquid without mechanical impurities red color	p.7.4
2	Density at 20 °C, kg/m3, not lower than	1,065	1,072	DSTU 7261
3	The temperature of the onset of crystallization, ° C, not higher	-38	-39	p.7.5
4	Boiling Point, °C, not less	104	106	p.7.13
5	Corrosive effect on metals, g / m2 per day, no more: - copper, brass, steel, cast iron, aluminum; - solder	0,15 0,3	0,088 0,095	p.7.7
6	Foaming, no more - the volume of foam, sm³ - foam stability, s	150 5	40 3	p.7.8 or ASTM D 1881
7	Swelling rubber,%, not more	5	3	p.7.9
8	pH at 20 °C	7,5-11,0	8,44	DSTU 2201.1 or p.7.10 or ASTM D 1287
9	Alkalinity, cm3, not less	1,5	2,57	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

Shelf life - 5 years from date of manufacture.

Laboratory technician

Laboratory head

Date of issue: 26.09.24





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.

EASY WIPE WINTER LICHID DE SPALARE PARBRIZ

1. GENERALITATI

Solutie pentru curatarea parbrizelor si a altor suprafete de sticla, conferind acestora un aspect clar, stralucitor, fara urme si o mai buna vizibilitate in trafic, atat pe timp de zi cat si de noapte. Produsul contine agenti tensioactivi, parfum si colorant. Produsul nu contine alcool metilic.

2. DOMENIUL DE UTILIZARE

Indeparteaza eficient orice tip de murdarie care se depune in mod frecvent pe parbrizul si luneta autovehiculelor in sezonul rece (gheata, smog, urme de grasimi sau uleiuri, excremente de pasari, alte impuritati etc.). Produsul are eficienta sporita pentru utilizarea la o temperatura de pana la **-20°C**, avand putere mare de curatare la o singura pompare. Utilizarea Easy Wipe Winter scade coeficientul de frecare al stergatoarelor, prelungind durata medie de viata a acestora. Produsul poate fi utilizat si la spalarea manuala a oglinzilor retrovizoare, exteriorul geamurilor si lunetei autovehiculelor, emanand un parfum placut.

3. MOD DE UTILIZARE

Se foloseste ca atare, fara a mai fi diluat.

Produsul este utilizat la o temperatura de pana la -20°C.

4. CONDITII TEHNICE DE CALITATE-ST LBX 13

Nr. crt	CARACTERISTICI	METODA DE VERIFICARE	VALORI	
			prevazut	typ
1	Aspect	Vizual	Omogen, clar	Omogen, clar
2	Culoare	Vizual	Albastru	Albastru
3	Miros	Olfactiv	Caracteristic parfumat	Caracteristic parfumat
4	Masa volumica absoluta Kg/l	ISO 758	0,95 ± 0,02	0,95 ± 0,02
5	Valoarea pH	ISO 4316	7,5+/- 0,5	7,5
6	Punct de congelare, °C	STAS 39	-20	-20

Ambalare: bidoane de plastic de 4 l.

Termenul de garanție - 2 ani in depozitare.



ChemSol Group S.R.L.

Șoseaua Ghimbavului nr. 46, Cristian,
Jud. Brasov, România, C.P. 507055
Tel: +(40)742.341.517
URL: www.pro-x.ro
e-mail: info@chemsol.ro

Conform S. F. nr. 7 Rev. 1/2009

© Copyright – ChemSol Group SRL
Toate drepturile rezervate.

ACTIVE WASH

DETERGENT ACTIV PENTRU EXTERIOR EXCLUSIV PENTRU UZ PROFESIONAL

- Pentru spălarea caroseriilor auto cu jet de apă la presiune înaltă (fără atingere).
- Foarte eficient pentru îndepărtarea grăsimilor, insectelor și a depunerilor persistente.
- Ideal pentru autotrisme, camioane, cisterne, utilaje agricole și mijloace de transport în comun.

ACTIVE WASH este un detergent activ, concentrat, cu acțiune polivalentă și efect de luciu, pentru spălarea fără frecare a autovehiculelor, în orice anotimp. Diluat corespunzător, produsul dizolvă și emulsionază în profunzime depunerile de uleiuri, grăsimi, fum, insecte și alte murdării de origine organică și anorganică, fără efecte dăunătoare asupra componentelor vopsite, din plastic și cauciuc. Formula avansată permite îndepărtarea rapidă și eficientă a depunerilor din trafic, conferind luciu și protecție caroseriilor auto. Este compatibil cu orice sursă de apă, nu pătează și nu lasă depuneri pe suprafețe.

Produsul concentrat se va utiliza diluat cu apă în raport de 1:50-1:30 sau 2%-3%, iar în spălătoriile Self Service se va seta pompa de dozare pe 55%-65%, în funcție de gradul de murdărie al suprafețelor de curățat, temperatura și duritatea apei folosită în procesul de spălare sau presiunea jetului de apă. Se aplică spumă pe suprafață prin pulverizare uniformă, de jos în sus, cu ajutorul echipamentelor sub presiune corespunzătoare (lance de spumare, nebulizatoare, pompă de înaltă / joasă presiune, etc.), se lasă să acționeze 2-3 minute după care se clătește cu jet de apă de înaltă presiune (120-180 bar recomandat). Se recomandă să verificați compatibilitatea produsului pe mașini care prezintă vopsele deosebit de uzate.

ATENȚIE! - Suprafețele fierbinți se vor răcori cu jet de apă înainte de aplicarea produsului. Se va evita aplicarea pe suprafețe sau ornamente din aluminiu.

Amestec tensioactivi, agenți de complexare, colorant, hidroxid de sodiu, apă demineralizată.

În recipientul original închis etanș, în spații ferite de îngheț și expunere directă la soare. Pentru recomandări suplimentare contactați distribuitorul zonal.

MOD DE UTILIZARE:

COMPOZIȚIE:

CONDIȚII DE DEPOZITARE:

CARACTERISTICI FIZICO – CHIMICE:

Aspect:	Lichid limpede, omogen	AMBALAJ / Kg.	COD PRODUS
Culoare:	VERDE	HDPE 5/11 Kg	CS-415-5/11
Densitate la 20°C, gr/cm ³ :	1,2 ± 0,5	HDPE 22 Kg	CS-415-22
pH la 20°C:	12,1 ± 0,5	HDPE 27 Kg	CS-415-27
Termen Valabilitate:	24 luni	HDPE 60 Kg	CS-415-60

PRECAUȚII:



PERICOL

H314 - Provoacă arsuri grave ale pielii și lezarea ochilor. **P101**: Dacă este necesară consultarea medicului, țineți la îndemână recipientul sau eticheta produsului. **P103**: Citiți eticheta înainte de utilizare. **P280**: Purtați mănuși de protecție/îmbrăcăminte de protecție/ecipament de protecție a ochilor. **P301+P330+P331**: ÎN CAZ DE ÎNGHIȚIRE: Clătiți gura. NU provocați vomă. **P303+P361+P353**: ÎN CAZ DE CONTACT CU PIELEA (sau cu părul): Scoateți imediat toată îmbrăcămintea contaminată. Clătiți pielea cu apă sau faceți duș. **P305+P351+P338**: ÎN CAZ DE CONTACT CU OCHII: Clătiți cu atenție cu apă timp de mai multe minute. Scoateți lentilele de contact, dacă este cazul și dacă acest lucru se poate face cu ușurință. Continuați să clătiți. **P501**: Aruncați conținutul/recipientul conform legislației în vigoare referitoare la tratarea reziduurilor. **EUH210**- Fișa cu Date de Securitate disponibilă la cerere.

UFI: HK20-5074-N00M-PX09

IMPORTANT:

Informațiile prezentate în aceasta Fișă Tehnică, reflectă cel mai bun efort la nivelul experienței și cunoștințelor noastre în domeniu, la momentul întocmirii documentului și sunt bazate pe surse și informații furnizate de producătorii materiilor prime, publicații tehnice în domeniu și teste de laborator. Responsabilitatea folosirii acestui produs în scopul destinat cade asupra utilizatorului.

Este interzisă modificarea sau distribuirea către terți a acestui document fără acordul scris al proprietarului de drept.

ChemSol Group SRL își rezervă dreptul de a face modificări neanunțate în informațiile de mai sus. Pentru varianta cea mai recentă a acestui document contactați un reprezentant ChemSol Group sau distribuitorul zonal.