

CERTIFICATE OF ANALYSIS № 524

Transmission oil TAP-15V

GOST 23652-79, zm. I-8



BUREAU
VERITAS
ISO 9001:2015

Batch № 524

Manufacturing date: 27.09.22

Batch net weight: 15 t

Product Characteristics

No	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/m3, not more than	930	880	GOST 3900
10	Corrosion test during 3 hr at 100°C on steel and copper plates, point, <u>not more than</u>	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. I-8 standard based on characteristics analyzed.

Shelf life - 5 years from date of manufacture.






CERTIFICATE OF ANALYSIS № 492

Hydraulic oil PROTEC HYDROIL HM+ 46



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

Batch № 492

ISO 11158 HM

DIN 51524 HLP

ISO VG 46

Manufacturing date: 30.06.23

Batch net weight: 3,6 t

Product Characteristics

No	Characteristics and units	Standard limits	Actual	Test method
1	Kinematic viscosity at 40°C, cSt, in range	41,4-50,6	45,8	DSTU GOST 33 or ASTM D445
2	Viscosity Index, not lower than	95	103	DSTU GOST 25371 or ASTM D2270
3	Total acid number, mg KOH per 1 g, not more than	2,0	0,91	GOST 11362 and P.7.6
4	Flash point, °C, not lower than	210	222	DSTU GOST 4333 or ASTM D92
5	Pour point, °C, not more than	-28	-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	ni	GOST 2477 or ASTM D95
8	Density at 20 °C, kg/m³, not more than	910	871	GOST 3900 or ASTM D1298
9	Ash content, %, not more than	0,4	0,265	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	3,5	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 complies with 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: 03.07.23



Meropa

Premium performance extreme pressure gear lubricants

Product description

Meropa® gear lubricants are premium quality extreme pressure industrial gear oils formulated to help provide good load carrying capacity, water demulsibility, oxidation stability and corrosion protection.

Customer benefits

- High thermal stability extreme pressure (EP) system is designed to help maintain clean gear and bearing surfaces, helping to minimise deposit formation
- High oxidation stability helps reduce in-service viscosity increases, which can optimise energy efficiency
- Effective wear and corrosion inhibiting formulation is designed to help extend equipment life and reduce maintenance downtime
- Offers extended drain intervals through reduced oxidation even in extreme pressure applications

Product highlights

- Helps minimise deposit formation through high thermal stability even under extreme pressures
- Designed to offer optimised energy efficiency thanks to high oxidation stability
- Formulated to reduce wear and corrosion to extend equipment uptime
- Helps contribute to extended drain intervals

Selected performance standards include

AGMA	AIST
David Brown	DIN
Fives Cincinnati	Grob Lubricant Chart
ISO	Joy Mining Machinery
Rexnord Falk	SMS Group
Sumitomo	Paramax
ZF	

Applications

Meropa gear lubricants are recommended for:

- industrial enclosed gearing where an AGMA extreme pressure lubricant is specified.
- bath, splash, circulating, or spray mist lubrication as applicable to the proper viscosity grade.
- general industrial plant lubrication where the performance properties of an AGMA extreme pressure lubricant is required.
- Rexnord gear drives requiring a mineral-based extreme pressure lubricant.

Product maintenance and handling

Meropa gear lubricants have a typical sulfur-phosphorus odor characteristic of industrial gear oils. A well-ventilated environment is recommended during use.

Avoid any spillage of used and unused product to the environment.

Product residue and package/container should be disposed of in dedicated collection points.

Approvals, performance and suitable for use

ISO Grade	68	100	150	220	320	460	680	1000
AIST (formerly US Steel) 224	M	M	M	M	M	M	M	
ANSI/AGMA 9005-F16-AS	M	M	M	M	M	M	M	M
David Brown S1.53.101(5E)	M	M	M	M	M	M	M	M
DIN 51517/3-CLP	M	M	M	M	M	M	M	M
Fives Cincinnati			M P-77	M P-74	M P-59	M P-35	M P-34	M P-78
Grob Lubricant Chart	A	A	A	A	A	A	A	A
ISO 12925-1 CKC	M	M	M	M	M	M	M	M
ISO 12925-1 CKD	M	M	M	M	M	M	M	M
Joy Mining machinery				M TO-MEP	M TO-HEP	M TO-HD		
Rexnord^a Falk gear drive models: Models: Class D, G, Y, link belt Model "R"	A	A	A	A	A	A	A	
SMS Group SN 180-2		A	A	A	A	A	A	
Sumitomo Drive Technologies Paramax 9000	A	A	A	A				
ZF TE-ML		04H A	04H A	04F A				

a: Consult with Rexnord/Falk Gear for applications: worm gear drives, high-speed drives, open gearing or any custom gear drive.

Always confirm that the product selected is consistent with the original equipment manufacturers (OEM) recommendation for the equipment operating conditions and customer's maintenance practices.

A: Approved

M: Performance – Meets or exceeds requirements.

Typical test data						
Test	Test Methods	Results				
Viscosity Grade		68	100	150	220	320
Typical Shelf Life: 60 months from date of filling indicated on the product label*						
AGMA Grade		2 EP	3 EP	4 EP	5 EP	6 EP
Density at 15°C, kg/L	ASTM D4052	0.8838	0.8849	0.8861	0.8872	0.8863
Viscosity, Kinematic cSt at 40°C cSt at 100°C	ASTM D445	68 8.8	100 11.4	150 15.0	220 19.3	320 24.5
Viscosity Index	ASTM D2270	101	100	100	99	98
Flash Point, °C	ASTM D92	236	250	264	278	278
Pour Point, °C	ASTM D97	-32	-29	-26	-23	-22
Foam Test, Seq. II Tendency, mL Stability, mL	ASTM D892	50 max 0	50 max 0	50 max 0	50 max 0	50 max 0
Water Separation Minutes to 3 mL emulsion	ASTM D1401	25	20	20	20	25
Copper Corrosion 3 h @ 100°C	ASTM D130	1B	1B	1B	1B	1B
Rust Test	ASTM D665A ASTM D665B	Pass Pass	Pass Pass	Pass Pass	Pass Pass	Pass Pass
4 Ball Weld Weld Point, kg Load Wear Index	ASTM D2783	250 45.9	250 >45	250 >45	250 52.9	250 >45
FE-8 Bearing Test Roller weight loss, mg	DIN51819-3	3.7	3.7**	3.7**	2.1	2.1#
FZG Scuff Test, A/8.3/90°C, Fail Stage	ASTM D5182	>14	>14	>14	>14	>14
FZG Pass Stage	ASTM D5182	12	12	12	12	12

* Typical Shelf Life: (a) if stored under normal conditions and (b) can be extended after re-testing.

The typical test data set out above does not constitute a specification. It is indicative only and can be affected by allowable production tolerances. Chevron may modify this test data. Modified data will supersede all previous data, so please ensure you refer to the latest version of this Product Data Sheet (PDS).

Typical test data				
Test	Test Methods	Results		
Viscosity Grade		460	680	1000
Typical Shelf Life: 60 months from date of filling indicated on the product label*				
AGMA Grade		7 EP	8 EP	8A EP
Density at 15°C, kg/L	ASTM D4052	0.8838	0.8849	0.8861
Viscosity, Kinematic cSt at 40°C cSt at 100°C	ASTM D445	460 31.2	680 41.4	1000 55.3
Viscosity Index	ASTM D2270	98	101	106
Flash Point, °C	ASTM D92	279	279	273
Pour Point, °C	ASTM D97	-21	-21	-22
Foam Test, Seq. II Tendency, mL Stability, mL	ASTM D892	50 max 0	50 max 0	50 max 0
Water Separation Minutes to 3 mL emulsion	ASTM D1401	30	40	20
Copper Corrosion 3 h @ 100°C	ASTM D130	1B	1B	1B
Rust Test	ASTM D665A ASTM D665B	Pass Pass	Pass Pass	Pass Pass
4 Ball Weld Weld Point, kg Load Wear Index	ASTM D2783	250 >45	250 51.4	250* 51.4*
FE-8 Bearing Test Roller weight loss, mg	DIN51819-3	2.1#	2.1#	2.1#
FZG Scuff Test, A/8.3/90°C, Fail Stage	ASTM D5182	>14	>14	>14
FZG Pass Stage	ASTM D5182	12	>12	>12

* Typical Shelf Life: (a) if stored under normal conditions and (b) can be extended after re-testing.

The typical test data set out above does not constitute a specification. It is indicative only and can be affected by allowable production tolerances. Chevron may modify this test data. Modified data will supersede all previous data, so please ensure you refer to the latest version of this Product Data Sheet (PDS).

Disclaimer: Data provided in this Product Data Sheet (PDS) is based on standard tests under laboratory conditions and is indicative only. This product should not be used for any purpose other than those expressly set out in this PDS. The user has sole responsibility for verifying that this product is suitable for the user's intended application. Neither Chevron nor its subsidiaries (i) make any warranty or representation as to the accuracy or completeness of this PDS; and/or (ii) accept liability for any loss or damage suffered as a result of the use of this product other than in accordance with the terms of this PDS.

Always confirm that the product selected is consistent with the original equipment manufacturer's recommendation for the equipment operating conditions and customer's maintenance practices.

When disposing of used product, take care to protect the environment and follow local legislation.

Safety Data Sheets (SDS's) are available for all Chevron products. If you require a SDS or any further information regarding a Chevron product, please contact your local sales office or see www.texacolubricants.com.

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