



# MEROPA®

68, 100, 150, 220, 320, 460, 680, 1000, 1500

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## PRODUCT DESCRIPTION

Meropa® gear lubricants are premium quality extreme pressure gear oils with excellent load carrying capacity, water demulsibility, oxidation stability, and corrosion protection.

## CUSTOMER BENEFITS

Meropa gear lubricants deliver value through:

- **Gear set efficiencies** — High thermal stability EP system helps maintain clean gear and bearing surfaces, minimizing deposits which interfere with effective lubrication. High oxidation stability limits in-service viscosity increases, which can lead to energy losses.
- **Long equipment life** — Effective EP system forms a protective film in areas of metal-to-metal contact, minimizing wear rates and maintaining efficient transfer of power. Good water separation and effective rust inhibitors protect surfaces against rust and corrosion. High thermal stability additive system minimizes the formation of acidic compounds which can be corrosive to bearing materials. The effective corrosion inhibitor provides additional protection for metal components.

- **Long oil life** — Effective oxidation inhibitors and copper passivator minimize oil oxidation, limiting viscosity increase and promoting long drain intervals.

## FEATURES

Meropa gear lubricants are high performance, multipurpose gear lubricants designed for many types of industrial gear lubrication services where loads and shock loadings are high.



## 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

Product(s) manufactured in the USA.

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.

A **Chevron** company product

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**Meropa®** — Continued

Meropa® gear lubricants are approved for:

ISO Grade	68	100	150	220	320	460	680	1000	1500
SMS Group SN 180-2		X	X	X	X	X	X		
ZF TE-ML 04H		X	X						
ZF TE-ML 04F				X					

Meropa gear lubricants meet the requirements of:

ISO Grade	68	100	150	220	320	460	680	1000	1500
ANSI/AGMA EP 9005-F16	X	X	X	X	X	X	X	X	X
DIN 51517/3 CLP	X	X	X	X	X	X	X	X	X
Fives Cincinnati			P-77	P-74	P-59	P-35	P-34	P-78	
US Steel 224 Specification	X	X	X	X	X	X	X		
David Brown S1.53.101 (5E)	X	X	X	X	X	X	X	X	
ISO 12925-CKC	X	X	X	X	X	X	X	X	
ISO 12925-CKD	X	X	X	X	X	X	X		
Joy Mining Machinery TO-MEP				X					
Joy Mining Machinery TO-HEP					X				
Joy Mining Machinery TO-HD						X			

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

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## TYPICAL TEST DATA

ISO Grade	Test Method	68	100	150	220	320
Product Number		277209	277219	277210	277211	277212
SDS Number		23551	23551	23551	23551	23551
AGMA Grade		2 EP	3 EP	4 EP	5 EP	6 EP
API Gravity	ASTM D287	31.0	30.6	29.7	28.4	27.3
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, Saybolt SUS at 100°F SUS at 210°F		334 55	495 64	744 77	1102 96	1618 116
Viscosity Index	ASTM D2270	101	100	100	99	98
Flash Point, °C(°F)	ASTM D92	236(457)	250(482)	264(507)	278(532)	278(532)
Pour Point, °C(°F)	ASTM D97	-32(-26)	-29(-20)	-26(-15)	-23(-9)	-22(-8)
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
Timken OK Load, lb	ASTM D2783	70	70	75	75	75
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

\*\*Read-across data: In this test, lower ISO grades are typically more severe than higher ISO grades; therefore, data is read-across from ISO 68

#Read-across data: In this test, lower ISO grades are typically more severe than higher ISO grades; therefore, data is read-across from ISO 220

Minor variations in product typical test data are to be expected in normal manufacturing.

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.

## TYPICAL TEST DATA

ISO Grade	Test Method	460	680	1000	1500
Product Number		277213	277214	277215	277216
SDS Number		23551	23551	23551	23551
AGMA Grade		7 EP	8 EP	8A EP	9 EP
API Gravity	ASTM D287	26.3	26.0	25.9	25.7
Density at 15°C, kg/L	ASTM D4052	0.8838	0.8849	0.8861	0.8872
Viscosity, Kinematic cSt at 40°C cSt at 100°C	ASTM D445	460 31.2	680 41.4	1000 55.3	1500 75.9
Viscosity, Saybolt SUS at 100°F SUS at 210°F		2341 144	3467 194	5115 262	7699 359
Viscosity Index	ASTM D2270	98	101	106	113
Flash Point, °C(°F)	ASTM D92	279(534)	279(534)	273(523)	272(522)
Pour Point, °C(°F)	ASTM D97	-21(-6)	-21(-6)	-22(-8)	-19(-2)
Foam Test, Seq. II Tendency, mL Stability, mL	ASTM D892	50 max 0	50 max 0	50 max 0	50 max 0
Water Separation Minutes to 3 mL emulsion	ASTM D1401	30	40	20	40
Copper Corrosion 3 h @ 100°C	ASTM D130	1B	1B	1B	1B
Rust Test	ASTM D665A ASTM D665B	Pass Pass	Pass Pass	Pass Pass	Pass Pass
Timken OK Load, lb	ASTM D2783	80	80	80	80
4 Ball Weld Weld Point, kg Load Wear Index	ASTM D2783	250 >45	250 51.4	250* 51.4*	250* 51.4*
FE-8 Bearing Test Roller weight loss, mg	DIN51819-3	2.1#	2.1#	2.1#	2.1#
FZG Scuff Test, A/8.3/90°C, Fail Stage	ASTM D5182	>14	>14	>14	>14
FZG Pass Stage	ASTM D5182	12	>12	>12	>12

\*Read-across data: In this test, lower ISO grades are typically more severe than higher ISO grades; therefore, data is read-across from ISO 680

#Read-across data: In this test, lower ISO grades are typically more severe than higher ISO grades; therefore, data is read-across from ISO 220

Minor variations in product typical test data are to be expected in normal manufacturing.

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.