

INDUSTRIAL GEAR OIL SERIES (MINERAL)

Industrial Gear Oil Series are extra high performance gear oils having outstanding extreme pressure characteristics and load-carrying properties, intended for use in all types of enclosed gear drives with circulation or splash lubrication systems. Industrial Gear Oil Series is designed to stay ahead of the changing needs of gearbox technology. Gearbox technology design trends are towards smaller units with similar power throughput. This increase in power density places increased demands on gear oils. Industrial Gear Oil Series oils are formulated to meet the stress by providing extra protection for gears, bearings and seals.

Industrial Gear Oil Series products are a leading member of industrial lubricants that enjoy a reputation for innovation and high performance capability. These mineral-based products are designed to provide high quality industrial gear oils, meeting the latest industry standards and with high versatility to lubricate a broad range of industrial and marine equipment.

Specifications and Approvals:

This product meets or exceeds the requirements of:	68	100	150	220	320	460	680
AGMA 9005-F16	X	X	X	X	X	X	X
China GB 5903-2011, L-CKC	X	X	X	X	X	X	X
China GB 5903-2011, L-CKD	X	X	X	X	X	X	X
DIN 51517-3:2018-09	X	X	X	X	X	X	X
ISO L-CKC (ISO 12925-1:2018)	X	X	X	X	X	X	X
ISO L-CKD (ISO 12925-1:2018)	X	X	X	X	X	X	X

Properties and Specifications:

Property	68	100	150	220	320	460	680
Grade	ISO 68	ISO 100	ISO 150	ISO 150	ISO 220	ISO 460	ISO 680
Viscosity Index, ASTM D2270	103	96	96	96	96	97	90
Rust Characteristics, Procedure B, ASTM D665	PASS	PASS	PASS	PASS	PASS	PASS	PASS
Density @ 15.6 C, kg/l, ASTM D4052	0,880	0,880	0,890	0,890	0,900	0,900	0,900
FE8 wear test, V50 roller wear, mg, DIN 51819-3	2	2	2	2	2	2	2
FZG Scuffing, Fail Load Stage, A/8.3/90, ISO 14635-1	12+	12+	12+	12+	12+	12+	12+
Flash Point, Cleveland Open Cup, °C, ASTM D92	230	230	230	240	240	240	250
Foam, Sequence I, Tendency/Stability, ml, ASTM D892	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Foam, Sequence II, Tendency/Stability, ml, ASTM D892	30/0	30/0	30/0	30/0	30/0	30/0	30/0
Four-Ball Extreme Pressure Test, Load Wear Index, kgf, ASTM D2783	45	45	45	47	47	47	47
Pour Point, °C, ASTM D97	-25	-24	-24	-23	-24	-15	-10
Kinematic Viscosity @ 40 C, mm ² /s, ASTM D445	68	100	150	220	320	460	680
Kinematic Viscosity @ 100 C, mm ² /s, ASTM D445	8,7	11,4	14,6	19,3	24,2	30,4	39,3

Gear Oil 68, 100, 150, 220, 320 460, 680 Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 21/12/2023 Revision date: 19/11/2024 Supersedes version of: 06/01/2024

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: Gear Oil 68, 100, 150, 220, 320 460, 680

Container size: -

1.2. Relevant identified uses of the substance or mixture and uses advised against

Application: Gear oil.

1.3. Details of the supplier of the safety data sheet

Supplier:

FACO PETROL KİMYA SANAYİ DİŞ TİCARET LTD. ŞTİ.

Center Office: Siteler Mh. 492 Sk. No: 1/A My Vista Smart Aliağa/İZMİR/TÜRKİYE

info@cosmomotoroil.com / www.cosmomotoroil.com

Phone: +90 552 222 6766

Emergency telephone number

Emergency telephone: +90 552 222 6766

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS: Not classified.

2.2. Label elements

Safety data sheet available on request.

2.3. Other hazards

Other: Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema, skin cracking and oil acne. The harmful effects may increase in used oil. The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals after repeated contact.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Mineral oil and additives.

Only classified substances above threshold limits or substances with an exposure limit are shown.

GHS:

<u>%:</u>	<u>CAS-No.:</u>	<u>EC No.:</u>	<u>REACH Reg. No:</u>	<u>Chemical name:</u>	<u>Hazard classification:</u>	<u>Notes:</u>
0.1-0.5	1474044-79-5	939-717-7	-	Calcium bis(di C8-C10, branched, C9 rich, alkyl naphthalenesulphonate)	Skin Irrit. 2;H315 Eye Irrit. 2;H319 Skin Sens. 1;H317	

Notes:

The mineral oil contained may be described by one or more of the following:
EC No. 265-157-1, Distillates (petroleum), hydrotreated heavy paraffinic; EC No. 265-169-7, Distillates (petroleum), solvent-dewaxed heavy paraffinic; EC No. 265-158-7, Distillates (petroleum), hydrotreated light paraffinic; EC No. 265-159-2, Distillates (petroleum), solvent-dewaxed light paraffinic.

Reference: The full text for all hazard statements is displayed in section 16.

4.1. Description of first aid measures

<u>Inhalation:</u>	Move into fresh air and keep at rest. In case of persistent throat irritation or coughing: Seek medical attention and bring these instructions.
<u>Skin contact:</u>	Remove contaminated clothing. Rinse skin immediately. Thoroughly rub with liquid soap and wash with lukewarm water. Get medical attention if any discomfort continues.
<u>Eye contact:</u>	Immediately flush with plenty of water for at least 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring along these instructions.
<u>Ingestion:</u>	DO NOT induce vomiting. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects: See section 11 for more detailed information on health effects and symptoms.

4.3. Indication of any immediate medical attention and special treatment needed

Medical attention/treatments: If there is any suspicion of aspiration into the lungs either directly or as a result of vomiting, obtain medical advice.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media: Extinguish with foam, carbon dioxide, dry powder or water fog. Cool containers exposed to heat with water spray and remove container, if no risk is involved.
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards: When heated and in case of fire, harmful vapours/gases may be formed. Fire in closed areas should only be extinguished by trained personnel.

5.3. Advice for firefighters

Protective equipment for fire-fighters: Wear suitable respiratory protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Mark the spillage. Avoid inhalation of oil mist and contact with skin and eyes. Keep public away from danger area. In case of spills, beware of slippery floors and surfaces.

Protective equipment: Wear necessary protective equipment.

6.2. Environmental precautions

Environmental precautions: Avoid discharge into drains. Contact local authorities in case of spillage to drain/aquatic environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material.

6.4. Reference to other sections

Reference: For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Observe good chemical hygiene practices. Avoid inhalation of oil mist and contact with skin and eyes. Avoid prolonged and repeated contact with oil, particularly used oil. Wash hands before breaks and before smoking, eating or drinking.

Technical measures: Use work methods which minimise oil mist production. Do not smoke or use open fire or other sources of ignition.

Technical precautions: When working with heated oil, mechanical ventilation may be required.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures for safe storage: Store in tightly closed original container in a well-ventilated place.

Storage conditions: Keep at a temperature not exceeding 45°C.

7.3. Specific end use(s)

Specific use(s): Lubricant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits:

CAS-No.:	Chemical name:	As:	Exposure limits:	Type:	Notes:	References:
-	Oil mist, -mineral	-	5 mg/m ³	PEL (Long Term)	-	
		-	10 mg/m ³	PEL (Short Term)	-	

8.2. Exposure controls

<u>Engineering measures:</u>	Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapours and oil mist.
<u>Respiratory equipment:</u>	No specific recommendations.
<u>Hand protection:</u>	Gloves (synthetic rubber, neoprene)
<u>Eye protection:</u>	Wear approved, tight fitting safety glasses where splashing is probable.
<u>Skin protection:</u>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<u>Hygiene measures:</u>	Wash hands after handling. Observe good chemical hygiene practices. Wash contaminated clothing before reuse. When using do not eat, drink or smoke. Always remove oil with soap and water or skin cleaning agent, never use organic solvents. Do not use oil-contaminated clothing or shoes, and do not put rags moistened with oil into pockets.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<u>Appearance:</u>	Viscous liquid.
<u>Colour:</u>	Yellow.
<u>Odour:</u>	Characteristic.
<u>Odour threshold:</u>	Not available.
<u>pH:</u>	Not applicable.
<u>Melting point / freezing point:</u>	Not available.
<u>Boiling point:</u>	Not available.
<u>Flash point:</u>	224-255°C ASTM D 92
<u>Evaporation rate:</u>	Not available.
<u>Flammability (solid, gas):</u>	Not applicable.
<u>Explosion limits:</u>	Not available.
<u>Vapour pressure:</u>	Not available.
<u>Vapour density:</u>	Not available.
<u>Relative density:</u>	~ 0.9
<u>Solubility:</u>	Soluble in: Organic solvents.
<u>Partition coefficient (n-octanol/water):</u>	Not available.
<u>Auto-ignition temperature (°C):</u>	Not available.
<u>Decomposition temperature (°C):</u>	Not available.
<u>Viscosity:</u>	68.2 – 682.4 mm ² /s (40°C)
<u>Explosive properties:</u>	Not available.
<u>Oxidising properties:</u>	9.2. Not available.
<u>Other information</u>	
<u>Other data:</u>	Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

<u>Reactivity:</u>	Not reactive.
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10.2. Chemical stability

<u>Stability:</u>	Stable under normal temperature conditions.
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10.3. Possibility of hazardous reactions

<u>Hazardous reactions:</u>	None known.
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10.4. Conditions to avoid

<u>Conditions/materials to avoid:</u>	Heat, sparks, flames.
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10.5. Incompatible materials

<u>Incompatible materials:</u>	Strong oxidizing substances.
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10.6. Hazardous decomposition products

<u>Hazardous decomposition products:</u>	None under normal conditions. Hazardous polymerisation will not occur.
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SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

<u>Acute Toxicity (Oral):</u>	Based on available data, the classification criteria are not met.
<u>Acute Toxicity (Dermal):</u>	Based on available data, the classification criteria are not met.
<u>Acute Toxicity (Inhalation):</u>	Based on available data, the classification criteria are not met.
<u>Skin Corrosion/Irritation:</u>	Based on available data, the classification criteria are not met.
<u>Serious eye damage/irritation:</u>	Based on available data, the classification criteria are not met.
<u>Respiratory or skin sensitisation:</u>	Based on available data, the classification criteria are not met.
<u>Germ cell mutagenicity:</u>	Based on available data, the classification criteria are not met.
<u>Carcinogenicity:</u>	Based on available data, the classification criteria are not met.
<u>Reproductive Toxicity:</u>	Based on available data, the classification criteria are not met.
<u>STOT - Single exposure:</u>	Based on available data, the classification criteria are not met.
<u>STOT - Repeated exposure:</u>	Based on available data, the classification criteria are not met.
<u>Aspiration hazard:</u>	Based on available data, the classification criteria are not met.
<u>Inhalation:</u>	Inhalation of oil mist or vapours formed during heating of the product may irritate the respiratory system and provoke throat irritation and coughing.
<u>Skin contact:</u>	Prolonged or repeated contact with used oil may cause serious skin diseases, such as dermatitis.
<u>Eye contact:</u>	May cause temporary eye irritation.
<u>Ingestion:</u>	Low order of acute toxicity, but aspiration following ingestion and vomiting may cause severe and potentially fatal chemical pneumonitis.
<u>Specific effects:</u>	The product contains a small amount of sensitising substance which may provoke an allergic reaction among sensitive individuals after repeated contact. Used oil may contain harmful contaminants.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity: Not classified as dangerous to the environment.

12.2. Persistence and degradability

Degradability: Potentially degradable, but will persist in the environment for long periods.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available on bioaccumulation.

12.4. Mobility in soil

Mobility: Spillages may penetrate the soil causing ground water contamination.

12.5. Results of PBT and vPvB assessment

PBT/vPvB: Not known.

12.6. Other adverse effects

Other adverse effects: Not known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

Contaminated packaging: Disposal through approved facilities is recommended.

SECTION 14: TRANSPORT INFORMATION

The product is not regulated as dangerous goods under IMDG Code, IATA-DGR and ADR/RID.

14.1. UN number

UN-No: Not regulated.

14.2. UN proper shipping name

Proper Shipping Name: Not regulated.

14.3. Transport hazard class(es)

Class: Not regulated.

14.4. Packing group

PG: Not regulated.

14.5. Environmental hazards

Marine pollutant: Not regulated.

14.6. Special precautions for user

Special precautions: Not regulated.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Transport in bulk: -

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulation: Singapore Standard SS 586: Part 2 : 2014; Globally harmonised system of classification and labelling of chemicals - Singapore's adaptations.
Guidelines on prevention and control of chemical hazard.
Singapore Standard SS 586: Part 3 : 2014; Preparation of safety data sheets (SDS).

SECTION 16: OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Handling of used oils:

Protect health - avoid prolonged and repeated skin contact. Wash with soap and water. Protect the environment - do not pollute drains, water courses or the soil. Contact your local authority for any used oil disposal instructions.

Abbreviations and acronyms PBT = Persistent, Bioaccumulative and Toxic.
used in the safety data sheet: vPvB = very Persistent and very Bioaccumulative.

Additional information: Classification according to Singapore Standard SS 586: Part 2 : 2014:
Calculation method.

Wording of H-statements:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

The information on this data sheet represents our current data and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature.