



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

PRODUCT GUIDE



Product Range

Products	Description
Engine Oil Additive Packages	
Diesel Engine Oil Additive Packages	
CHEMPOL 8108	CK-4,CJ-4 Diesel Engine Oil Additive
CHEMPOL 7235	CJ-4,CI-4, CH-4, CI-4/SM, ACEA E7,E5 Heavy Duty Diesel & Gasoline Engine Oil Additive
CHEMPOL 8012	CI-4,CH-4,CF-4/SL, CG-4, SL/CF, ACEA A3/B3/B4 Diesel & Gasoline Engine Oil Additive
CHEMPOL 8013	CI-4, CH-4/SL,CF-4/SL,CF-4/SJ,CD/SF Diesel & Gasoline Engine Oil Additive
CHEMPOL 7182	CF-4, CF/ SJ,SG, ACEA E2 Diesel & Gasoline Engine Oil Additive
CHEMPOL 7998A	CD, CF, CF/SF, CC/SC Diesel & Gasoline Engine Oil Additive
CHEMPOL 7601	CF-4, STOUS (Super Tractor Oil Universal) Engine Oil Additive
CHEMPOL 10000	CI-4,CH-4, CF-4 Heavy Duty Diesel Engine Oil Additive
Gasoline Engine Oil Additives Package	
CHEMPOL 61458	SP GF-6A Gasoline Engine Oil Additive
CHEMPOL 61145	SN/CF, ILSAC GF-5 Gasoline /Passenger Car & Diesel Engine Oil Additive
CHEMPOL 63011	SN, SM, SL Gasoline /Passenger Car Engine Oil Additive
CHEMPOL 66025	SL, SJ, SG, SF Gasoline Engine Oil Additive
CHEMPOL 6225	SL/CF,SF/CF, SE/CD,SD/CC,SC/CC,SB/CB Gasoline & Diesel Engine Additive
CHEMPOL 5288	SN, SM , JASO MA/MA2 ,Four Stroke Additive Package
CHEMPOL 5025	API TC, JASO FC,Two Stroke Additive Package
Chempol Boosters & Components	
CHEMPOL 5395	Zinc Booster, Antioxidant, ZDDP & Corrosion Inhibitor
CHEMPOL 5210	Dispersant Ash less , Chlorine Free, Polyisobutylene succinic anhydride.
CHEMPOL 5540 C	TBN 400 (Total Base Number), Over based Synthetic Calcium Sulfonate.
CHEMPOL 5540 M	TBN 400 (Total Base Number), Over based Synthetic Magnicium Sulfonate.
CHEMPOL 5555	PPD - Pour Point Depressant, PMA
CHEMPOL 5800	Non Silicone Antifoam
CHEMPOL 5177	Antifoam , Silicon Fluid (Concentrated)
Viscosity Index Improvers	
CHEMPOL P-30	40 SSI , Solid OCP Pellet & Solubilized Liquid VII
CHEMPOL P-20	35 SSI , Solid OCP Pellet & Solubilized Liquid VII
CHEMPOL P-25	45 SSI , Solid OCP Pellet & Solubilized Liquid VII
CHEMPOL 5026	22 SSI , Solid OCP Bale & Solubilized Liquid VII
DUTRAL® 5550 & 5530	24 SSI , Solid OCP Bale Form & Pellet
VISCOPOLY 1000	24 SSI , Solubilized Liquid VII
VISCOMAX 1300, 1800, 2200	24 SSI , Solubilized Liquid VII



Product Range

Products	Description
Chempol Transmission Oil Additive Packages	
CHEMPOL 4155	DEXRON III, II , MERCON, Alison C-4, CAT TO -2, HF-0 & For Other ATF Fluids
CHEMPOL 4373A	DEXRON VI , MERCON LV, JASO 1 ALV.
CHEMPOL 4343	API GL-5, GL-4 & EP Gear Oil Additive Package
CHEMPOL 4373	CVT, DCT MERCON LV, JASO 1 ALV.
Chempol Industrial Oil Additive Packages	
CHEMPOL 5065	Ash less Rust & Corrosion Inhibitor For Turbine, Compressor & Hydraulic Fluids
CHEMPOL 5103	Water Soluble Cutting Fluid additive, Nitrite Free.
CHEMPOL 5022	Anti-wear - Hydraulic & Compressor Oil Additive Package
CHEMPOL 51810	Knitting Oil Additive - Emulsifier
Speciality Chemicals	
CHEMPOL BRAKE FLUIDS	Brake Fluid Dot 3, 4 & 5.1
CHEMPOL GLYCOLS	BTG & BDGE
CHEMPOL DYES	Blue, Yellow, Red, Green & Brown
Grease Additives	
CHEMPOL G - HCO	Hydrogenated Castor Oil
CHEMPOL G - (12 HSA)	12 - Hydroxy Stearic Acid
CHEMPOL G- Lithium Hydroxide	Lithium 12-Hydroxystearate (Thickener)
CHEMPOL G - Tallow	Animal Fat
CHEMPOL G - Clay	Bentonite Clay
Synthetic Oils	
Synthetic Oils PAO (PolyAlphaolefin)	2,4,8,65 & 150 (Highly Branched Isoparaffinic PolyAlphaolefin)
Synthetic Oils Ester	(Di, Poly & Complex Ester)



ENGINE OIL ADDITIVE PACKAGES

DIESEL ENGINE OIL ADDITIVES





CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL 8108 Diesel Engine Oil Additive

Application

CHEMPOL 8108 is a performance additive package for formulating premium quality diesel engine oils. Used at the recommended treat rate in combination with approved base stocks and viscosity modifiers, CHEMPOL 8108 provides engine oils meeting API CK-4 & CJ-4

Dosage Recommended (WT%)

Performance level	Dosage (WT%)
CK-4	13.6
CJ-4	13.2

Typical Characteristics

Property	Value	Method
Appearance	Brownish Red Clear Liquid	Visual
Density (20°C) , kg/m ³	950-1050	ASTM D4052
Flash point (COC) , °C	≥180	ASTM D92
Kinematic Viscosity (100°C), mm ² /s	100-130	ASTM D445
Phosphorus, wt%	0.83	ASTM D5185
Zinc, wt%	0.92	ASTM D5185
Calcium, wt%	1.54	ASTM D5185
Boron, wt%	0.06	ASTM D4951
Molybdenum wt%	0.075	ASTM D5185
Sulfur, wt%	2.5-2.8	ASTM D4294
TBN, mg KOH/g,	74	ASTM D2896

Product packaging

Bulk, Drum.

Handling/ Precaution

Please observe the US DOT standard and the MSDS of this product when storing, shipping, handling and using this product. It is nonflammable, non-explosive and non corrosive. The highest storage temperature shall not exceed 75°C. For long term storage, the highest temperature shall not more than 45°C. For product details of safety, health and environmental precautions, please refer to the MSDS of this product.





CHEMPOL 7235

Heavy-Duty Diesel Engine Oil Additive

Application

CHEMPOL 7235 meets or exceeds the requirements of API CJ-4/CI-4+/CI-4/CF/SM, ACEA E7, Cummins 20081, Mack EO-O Premium Plus 07, Caterpillar ECF-3, DDC PGOS93K218, Volvo VDS-4, Navistar, DHD-1, and JASO DH-2 when formulated as an SAE 15W-40 engine oil, using an appropriate non-dispersed viscosity modifier and qualifying Group II base oils. Contact a Chempol representative for a list of all applicable industry & OEM claims and base oils coverage.

VI Improver:

CHEMPOL 7235 is formulated for use with a non-dispersed OCP Viscosity modifier with a corresponding shear stability of 23 SSI to 35 SSI.

Dosage Recommended (WT%)

13.9 wt% (12.4 vol%) is the recommended treat rate.

Typical Characteristics:

Property	Method	Value
Specific Gravity @ 15.6°C, g/ml	ASTM D4052	0.9726
Flash (COC), °C	ASTM D92	185 min.
Viscosity @ 40 °C, cSt	ASTM D445	3,450
Viscosity @ 100 °C, cSt	ASTM D445	187
Calcium, wt%	ASTM D5185	0.76
Phosphorus, wt%	ASTM D5185	0.79
Zinc, wt%	ASTM D5185	0.88
Nitrogen, wt%	ASTM D5291	0.90
Molybdenum, wt%	ASTM D5185	0.06
Magnesium, wt%	ASTM D5185	0.71
Sulfur, wt%	ASTM D4294	2.15
Sulfated Ash, wt%	ASTM D874	6.9
TBN, mg KOH/ g	ASTM D2896	71

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 8012 Diesel & Gasoline Engine Oil Additive

Application

CHEMPOL 8012 is a performance additive package for formulating premium quality diesel engine oils. Used at the recommended treat rate in combination with approved base stocks and viscosity modifier, CHEMPOL 8012 provides engine oils meeting the API performance category CI-4/CH-4 & CF-4, among others specifications. Lubricants formulated with CHEMPOL 8012 can also be used in gasoline engines requiring API SL category products. Claims are base stock and viscosity grade specific. For more information; contact your local CHEMPOL Representative.

Dosage Recommended (WT%)

Performance level	Dosage (WT%)	
	15W-40, 20W-50	10W-30, 10W-40
CI-4	8.8	9.6
CH-4	8.0	8.6
CF-4/SL	5.8	6.2

Typical Characteristics:

Property	Method	Value
Appearance	Visual	Reddish Brown Clear Liquid
Density (20°C), kg/m ³	ASTM D4052	950-1050
Flash point (COC), °C	ASTM D92	≥180
Kinematic Viscosity (100°C), mm ² /s	ASTM D445	100-130
Calcium, wt%	ASTM D5185	3.5-3.8
Zinc, wt%	ASTM D5185	1.41-1.58
Phosphorus, wt%	ASTM D5185	1.35-1.50
TBN, mg KOH/g	ASTM D2896	115-125

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 8013 Diesel & Gasoline Engine Oil Additive Package

Application

This product is formulated with detergent, ashless dispersant, anti-friction agent and complex antioxidant. It has good high temperature detergency, low temperature dispersancy, antioxidation & corrosion inhibition and antiwear property. The specially selected magnesium salt, molybdenum salt and high molecular weight boronized ashless dispersant in this product form a high temperature and pressure resistant lubricating protection film, which provide excellent protection to engines running at high temperature, high speed and heavy duty conditions. With good compatibility with Group II, Group III and synthetic oil, it is a high quality engine oil additive package.

Dosage Recommended (WT%)

Performance level	Dosage (WT%)	
	Mono	Multi
CI-4, CH-4/SL	-	12.0
CF-4/SL	-	7.5
CF-4/SJ	6.0	6.2
CD/SF	4.6	4.8

Typical Characteristics:

Property	Method	Value
Appearance	Visual	Brownish red clear liquid
Density (20°C), kg/m ³	ASTM D4052	950-1050
Flash point (COC), °C	ASTM D92	≥180
Kinematic Viscosity (100°C),	ASTM D445	105-150
Phosphorus, wt%	ASTM D5185	≥0.95
Zinc, wt%	ASTM D5185	1.03
Calcium, wt%	ASTM D5185	≥3.0
TBN, mg KOH/g	ASTM D2896	≥110

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 7182 Diesel & Gasoline Engine Oil Additive

Application

CHEMPOL 7182 additive is an economic diesel engine oil package developed to meet a range of specific market requirements. This additive can be used to blend API CF-4/SJ performance oils.

Dosage Recommended (WT%)

The recommended dosage of for CHEMPOL 7182 additive is 9.0 WT%.

- API CF-4
- API CF/SJ

Typical Characteristics

Property	Method	Value
Appearance	Visual	Amber Oily Liquid
Specific gravity @ 15.6 °C, g/ml	ASTM D 4052	0.990
Flash Point (COC), °C	ASTM D 92	≥180
Viscosity @ 100 °C, cSt	ASTM D 445	137
Calcium, wt%	ASTM D 5185	2.90
Zinc, wt%	ASTM D 5185	1.33
Phosphorus, wt%	ASTM D 5185	1.20
Total Base Number, mg KOH/g	ASTM D 2896	92

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 7998A Diesel & Gasoline Engine Oil Additive

Description

CHEMPOL 7998A additive is a heavy duty diesel package which can be used for blending oils meeting API CD, CF/SF with TBN in excess of 8 mg KOH/g.

Dosage Recommended (WT%)

Performance Levels	Grades	WT%
API CD, API CF	Multi	4.4
API CD, API CF	Mono	4.2
API CF/SF	Multi	4.5
API CF/SF	Mono	4.5
API CC/SC	Mono	1.20

Typical Characteristics

Property	Method	Value
Density @ 15.6 °C, g/ml	ASTM D 4052	1.0
Flash Point (COC), °C	ASTM D 92	≥180
Total Base Number, mg KOH/g	ASTM D 2896	190
Viscosity @ 100 °C, cSt	ASTM D 445	60-85
Calcium, wt%	ASTM D 5185	7.24
Zinc, wt%	ASTM D 5185	2.50
Phosphorus, wt%	ASTM D 5185	2.03

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 7601 Tractor Oil Additive

Application

CHEMPOL 7601 additive is a rationalized additive system for the formulation of STOUS meeting the requirements of all tractors.

Dosage Recommended (WT%)

The recommended dosage for CHEMPOL 7601 additive is 13.0 %wt to meet all of the latest tractor requirements. At 11.5 %wt, CHEMPOL 7601 additive can be used to provide an economic STOUS meeting the basic needs of the market.

Features

- Wear and Friction control suitable for all transmissions, including power shift transmissions covered by Ford 134-D
- Diesel engine performance up to and including API CF-4.
- Gear protection for hypoid axles.

Typical Characteristics

Property	Method	Value
Density @ 15.6 °C, g/ml	ASTM D 4052	9.8
Flash Point (COC) C°	ASTM D 92	≥180
Total Base Number, mg KOH/g	ASTM D 2896	85
Viscosity 100 C°, cSt	ASTM D 445	78
Calcium, wt%	ASTM D 5185	2.74
Zinc, wt%	ASTM D 5185	1.10
Phosphorus, wt%	ASTM D 5185	1.12

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 10000 HDEO Additive Package

Key Performance Benefits

CHEMPOL 10000 has been formulated based on insights from truck owner drivers, fleet operators and workshop mechanics operating in emerging markets. CHEMPOL 10000 is designed to deliver the key performance benefits required with low and flexible treat rates.

Recommended Dosage

Performance Levels	Grades	Mass %
API CH-4/CI-4	Mono/Multi	9.5
API CF-4	Multi	7.1

CHEMPOL 10000 demonstrates performance reserve delivering superior protection from engine wear, Maintains Engine Power, excellent control over deposits to maintain power over a longer oil drain interval.

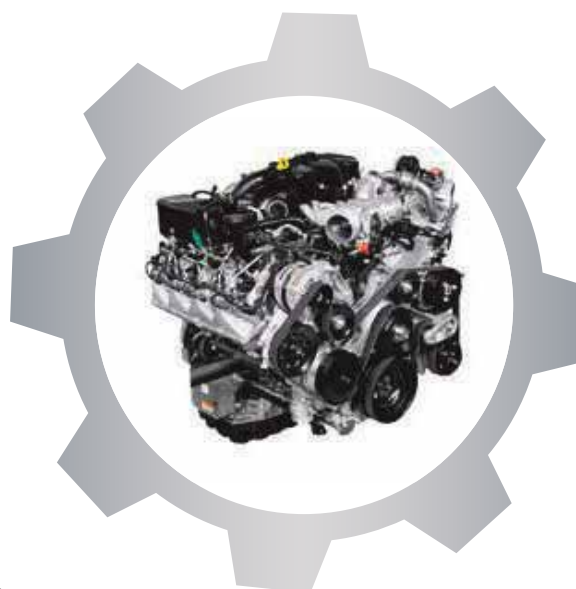
Typical Characteristics

Property	Values
Appearance Dark	Brown Slightly Hazy Liquid
Density @ 15°C, g/ ml	1.013
Viscosity @ 100°C, mm ² / s	160
Flash Point (PMCC), °C	135
Total Base Number, mgKOH/g	112
Calcium, % weight	3.36
Zinc, % weight	1.36
Phosphorus, % weight	1.47
Boron, % weight	0.08
Molybdenum, % weight	0.03

Handling Information

Max Handling Temp:70°C

Shelf Life: 24 months at ambient temperature

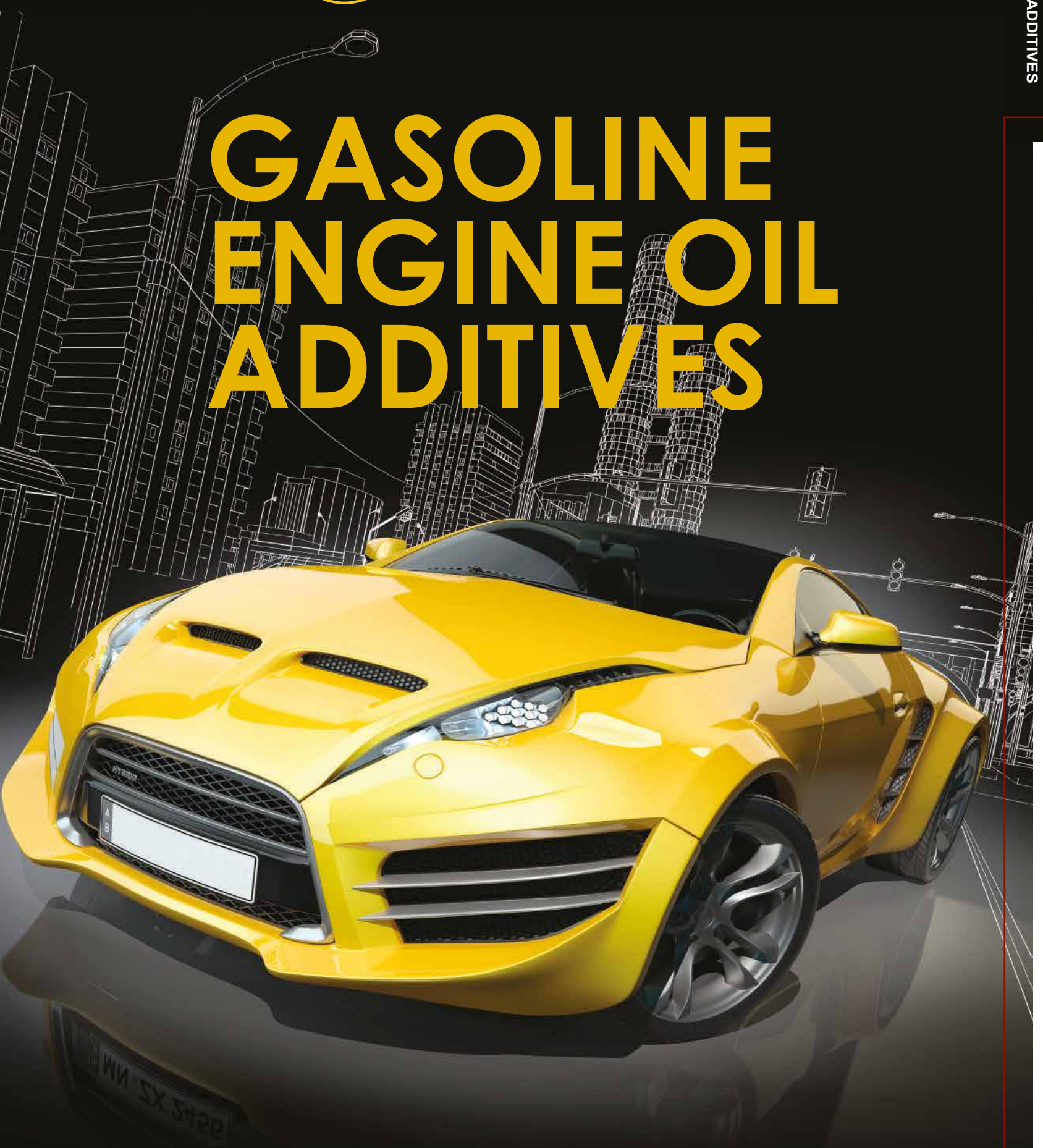






CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

GASOLINE ENGINE OIL ADDITIVES



PCMO
ADDITIVES



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY





CHEMPOL 61458

Optimum Protection for TGDI Designs

Application

CHEMPOL 61458 is a new additive technology formulated to exceed the performance requirements of the current API SP ILSAC GF-6A specification and address the enhanced performance demands of the latest turbocharged gasoline direct injection (TGDI) engine designs. These engines represent a more severe application for the lubricant.

Dosage Recommended (WT%)

Performance level	SAE Viscosity Grade	Dosage(WT%)
API SP-RC, ILSAC GF-6A	0W-20, 0W-30, 5W-20, 5W-30, 10W-30	8
API SP-RC	5W-40, 10W-40	8

Typical Characteristics

Property	Method	Value
Specific Gravity @ 15.6°C	ASTM D 4052	0.965
Viscosity @100 °C, cst	ASTM D 445	95
Flash Point (COC), °C	ASTM D 92	≥180
Total Base Number, mg KOH/g	ASTM D 2896	93
Zinc, wt%	ASTM D 5185	0.97
Phosphorus, wt%	ASTM D 5185	0.89
Molybdenum (ppm)	ASTM D 5185	973
Magnesium wt%	ASTM D 5185	0.56
Calcium, wt%	ASTM D 5185	1.45
Nitrogen, wt%	ASTM D 5291	1.10

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 61145

Gasoline & Diesel Engine Oil Additives

Application

CHEMPOL 61145 is a new additive technology designed to meet the latest ILSAC GF-5 and API SN/CF industry requirements as well as the performance demands of the new GM dexos1 specification in cost-effective formulations. It contains special additives to impart excellent deposit control, oil oxidation resistance, wear & rust control in all types of engines. It also improves viscosity index of engine oils. By providing excellent wear protection during starting. Our CHEMPOL 61145 ensures enhanced engine life ensures better lubrication, reduces oil consumption, enhances oil life, and reduces the friction.

Dosage Recommended (WT%)

Using Non-Dispersant/OCP V.I. Improver and Group I/Group II/III/Synthetic base oils, the following performance level can be met.

Performance level	SAE Viscosity Grade	Dosage(WT%)
API SN/CF ILSAC GF-5	15W-40, 20W-40, 20W-50, 5W-30, 10W-30, 5W-40, 10W-40, 20W, 30W, SAE 30, SAE 40, SAE 50, 0W-X	8.9

Typical Characteristics

Property	Method	Value
Density @15 °C	ASTM D 4052	0.958
Viscosity @100 °C, cst	ASTM D 445	135
Flash Point (COC), °C	ASTM D 92	≥180
Total Base Number, mg KOH/g	ASTM D 2896	95
Zinc, wt%	ASTM D 5185	1.02
Phosphorus, wt%	ASTM D 5185	0.87
Molybdenum, wt%	ASTM D 5185	0.2
Magnesium wt%	ASTM D 5185	0.59
Calcium, wt%	ASTM D 5185	1.59
Nitrogen, wt%	ASTM D 5291	1.0
Boron, wt%	ASTM D 4951	0.12

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 63011 Gasoline Engine Oil Additives

Application

CHEMPOL 63011 is a PCMO additive package which has been designed to deliver cost effective API SN/SM/SL. When blended with Group II & III base stocks and appropriate viscosity modifiers the performance claims as shown below can be made:

Dosage Recommended (WT%)

Performance level	Dosage(WT%)
API SN	7.6
API SM	7.28
API SL	7.0

Typical Characteristics

Property	Method	Value
Density @15 °C	ASTM D 4052	0.946
Viscosity @100 °C, cst	ASTM D 445	105
Flash Point (COC), °C	ASTM D 92	140 Minimum
Total Base Number, mg KOH/g	ASTM D 2896	103
Zinc, wt%	ASTM D 5185	1.08
Phosphorus, wt%	ASTM D 5185	0.98
Molybdenum, wt%	ASTM D 5185	0.21
Sulfated Ash wt%	ASTM D 874	11.85
Calcium, wt%	ASTM D 5185	2.82
Nitrogen, wt%	ASTM D 5291	0.90

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 66025

Gasoline Engine Oil Additives

Application

Chempol 66025 is formulated with high quality Calcium sulfonate and ashless dispersant, oxidation & corrosion inhibitor and high-temperature assistant antioxidant. It can meet the requirements of SL/SJ/SG in Group II and Group III base oil and can blend 5W-20, 5W-30, 5W-40, 10W-30, 10W-40 viscosity grade gasoline engine oil and 4T motorcycle oil.

Dosage Recommended (WT%)

Performance level	Dosage(WT%)
API SL	5.6
API SJ	4.6
API SG	4.0
API SF	3.8

Typical Characteristics

Property	Method	Value
Density @15 °C	ASTM D 4052	0.946
Viscosity @100 °C, cst	ASTM D 445	105
Flash Point (COC), °C	ASTM D 92	140 Minimum
Total Base Number, mg KOH/g	ASTM D 2896	103
Zinc, wt%	ASTM D 5185	2.06
Phosphorus, wt%	ASTM D 5185	1.87
Molybdenum, wt%	ASTM D 5185	0.18
Sulfated Ash wt%	ASTM D 874	11.85
Calcium, wt%	ASTM D 5185	3.91
Nitrogen, wt%	ASTM D 5291	0.90

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 6225 Passanger Car & Diesel Engine Oil Additive

Application

CHEMPOL 6225 additive is a passenger car engine oil package that utilizes a core technology, which allows full rationalization to the more classical API performance specifications.

Dosage Recommended (WT%)

CHEMPOL 6225 additive has been developed to give efficient and economical treat rates to permit the manufacture of oils ranging in quality levels from API SF/CF to SB/CB.

API Performance Levels	Monograde WT%	Multigrade WT%
SF/CF	4.7	4.9
SF/CD	4.7	4.7
SF/CC	4.7	4.7
SE/CD	4.3	4.5
SE/CC	4.0	4.3
SD/CC	3.5	3.8
SC/CC	3.0	3.3
SB/CB	2.0	2.2

Typical Characteristics

Property	Method	Value
Appearance	Visual	Dark Brown Viscous Liquid
Specific gravity @15.6 °C, g/ml	ASTM D 4052	1.02
Flash Point (PMCC), °C	ASTM D 93	140
Viscosity @100 °C, cSt	ASTM D 445	120
Total Base Number, mg KOH/g	ASTM D 2896	116
Calcium, wt%	ASTM D 5185	3.8
Zinc, wt%	ASTM D 5185	2.07
Phosphorus, wt%	ASTM D 5185	1.88

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 5288

4-Stroke Engine Oil Additive

Application

Chempol 5288 is an advanced additive technology specially designed for formulating premium 4-stroke motorcycle engine oils. Oils blended with CHEMPOL 5288 in a wide range of base stocks meet JASO T903:2011 requirements including JASO MA2 friction category for improved clutch performance. It also provides JASO Quality Category levels ranging from SN to SJ allowing for product line rationalization as well as optimized logistics and storage, reducing overall cost. CHEMPOL 5288 is suitable for use in both air-cooled and liquid-cooled 4-stroke motorcycles.

Performance level	SAE Viscosity Grade	Dosage(WT%)
JASO MA/MA2 API SN	10W-40, 15W-40, 20W-40, 20W-50	10.1
JASO MA/MA2 JASO Quality Category SN	All	10.1
JASO MA/MA2 JASO Quality Category SM	All	8.75

Typical Characteristics

Property	Method	Value
Appearance	Visual	Dark Brown Viscous Liquid
Specific gravity @15.6 °C	ASTM D 4052	0.975
Flash Point (COC), °C	ASTM D 93	140 Minimum
Viscosity @100 °C, cSt	ASTM D 445	64
Total Base Number, mg KOH/g	ASTM D 2896	83
Calcium, wt%	ASTM D 5185	2.35
Zinc, wt%	ASTM D 5185	1.05
Phosphorus, wt%	ASTM D 5185	0.96
Nitrogen, wt%	ASTM D 5291	0.68

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 5025 Two - Stroke Additive Package

Application

CHEMPOL 5025 additive is a low ash multifunctional additive for two stroke oils. It has been developed to meet the latest performance requirements including JASO FC, Global GC/GD and Thailand Industrial Standards Institute (T.I.S.I).

Dosage Recommended (WT%)

- 5.0 %wt for API TC, JASO FC, Global GC and T.I.S.I performance levels.
- 7.5 %wt for the proposed Global GD performance level.

Features

- Strong detergent performance.
- Increased protection from piston seizure, ring sticking, engine deposits and exhaust blocking.
- Ability to be used with a wide variety of base stock systems.
- A rationalized system to cover performance for API TA to Global GD.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Dark Brown Viscous Liquid
Specific gravity @15.6 °C, g/ml	ASTM D 4052	0.925
Flash point, PMCC, °C	ASTM D 93	155
Viscosity @ 100 °C, cSt	ASTM D 445	190
Total Base Number, mgKOH/g	ASTM D 2896	41
Calcium, wt%	ASTM D 5185	0.53

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.







CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

**BOOSTERS
& COMPONENTS**

CHEMPOL BOOSTERS & COMPONENTS





CHEMPOL 5395 Antioxidant

Application

CHEMPOL 5395 additive is prepared from butyl octyl thiophosphoric acid. It provides the lubricant with fine anti-oxidant/corrosion, antiwear, thermostability, and certain extreme pressure performance.

Dosage Recommended

The dosage of CHEMPOL 5395 will vary with application and base stock quality.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Clear Amber Liquid
Specific gravity @15.6 °C, g/ml	ASTM D 4052	1.06 to 1.15
Flash Point, COC, °C	ASTM D 92	206
Viscosity @ 100 °C, cSt	ASTM D 445	23.2
Zinc, wt%	ASTM D 5185	8.0 to 10
Phosphorus, wt%	ASTM D 5185	6.0 to 8.5

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 5210

Ashless Dispersant Additive

Application

CHEMPOL 5210 has high temperature detergency and low temperature dispersing capability. Compared to common dispersing agents, it has better low and high temperature dispersing capability and, it is free of chlorine, which meets the demands of environment. Widely used in gasoline, diesel and gas engine oils.

Dosage Recommended (WT%)

The recommended dosage is 1-5% by weight depending on the application.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Reddish Brown Transparent Viscous Liquid
Kinematic Viscosity@100°C, cSt	ASTM D 445	250
Total Base Number, mg KOH/g	ASTM D 2896	25
Nitrogen Content , wt%	ASTM D 5291	1.8
Flash Point (COC), °C	ASTM D 92	>180

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL 5540C Over Based Calcium Sulfonate

Application

CHEMPOL 5540C is a Calcium Sulphonate Base Number Booster designed for use in lubricants. Nominal dosages would range from 0.5 to 5.0 %wt of the finished lubricant. Other applications include automotive, diesel, marine, railroad and stationary diesel lubricants. The use of CHEMPOL 5540C is recommended for lubricants where high alkalinity is desired to neutralize the acidic fuel combustion by products.

Typical Characteristics

Property	Method	Value
Specific Gravity @ 15.6 °C, g/ml	ASTM D 4052	1.2
Flash Point, COC, °C	ASTM D 92	208
Kinematic Viscosity @100 °C, cSt	ASTM D 445	81
Total Base Number, mgKOH/g	ASTM D 2896	401
Calcium, wt%	ASTM D 5185	15.30

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 5540M

Over Based Magnesium Sulfonate

Application

CHEMPOL 5540M is a general purpose 400 TBN over based magnesium sulfonate typically used as a detergent and rust inhibitor in crankcase lubricants. CHEMPOL 5540M applications include automotive, diesel and stationary diesel lubricants. Nominal dosages would range from 0.5 to 5.0 wt. % of the finished lubricant. CHEMPOL 5540M is compatible with most mineral base oils, white oils, and synthetic base stocks.

Typical Characteristics

Property	Method	Value
Magnesium, wt. %	ASTM D 5185	9.3
Magnesium Sulfonate, wt. %	Calculated	28.0
Total Base Number	ASTM D 2896	395
Water, wt. %	ASTM D 1364	0.4
Viscosity@ 100°C, cSt	ASTM D 445	150
Flash Point, COC °C	ASTM D 92	220
Specific Gravity 15°C	ASTM D 4052	1.110
Color (dilute)	ASTM D 6045	5.0
Sulfur, wt%	ASTM D 4294	2.00

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL 5555 Pour Point Depressant

Application

Shear-Stable Pour Point Depressants for use in engine oils, hydraulic fluids and gear oils. Advanced technology tailored to provide robust low-temperature solutions across a broad range of lubricants. Particularly effective in formulations using catalytically dewaxed base stocks and higher ethylene content OCP viscosity modifiers. Conventional pour point depressants particularly effective in lubricants formulated with solvent-refined base stocks.

Dosage Recommended (WT%)

Typical addition rates are 0.1 % wt to 0.3 % by wt. Higher treat rates – for example, 0.5 % wt to 1.0 % by wt – may be required for SAE 80W-90 gear oils.

Composition

CHEMPOL 5555 is a viscous concentrate to polyalkyl methacrylate in highly refined neutral oil.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Viscous & clear
ASTM Colour	ASTM D 6045	1.0
Specific gravity @ 15.6 °C, g/ml	ASTM D 4052	0.92
Flash Point (PMCC), °C	ASTM D 93	150
Viscosity @ 100 °C, cSt	ASTM D 445	390

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 5800

Non-Silicon Type Foam Inhibitor for use in Automotive & Industrial Lubricants

Application

CHEMPOL 5800 is recommended for use at 50 to 1,000 ppm to impart Anti-foaming characteristics to blended lubricants.

Features

- Good solubility characteristics
- Improved foam inhibitor as measured by ASTM 892 foam test
- High flash point

Typical Characteristics

Property	Method	Value
Specific gravity @ 15.6 °C, g/ml	ASTM D 4052	0.960
Flash Point (PMCC), °C	ASTM D 93	120
Viscosity @ 100 °C, cS	ASTM D 445	48.0
Viscosity @ 40 °C, cSt	ASTM D 445	475.0
Pour Point, °C	ASTM D 97	-23

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 5177

Silicon Base Antifoam Inhibitor

Application

CHEMPOL 5177, silicon base antifoam inhibitor is prepared from Dimethylpolysiloxane polymers with linear chains. It can be used as Foam Inhibitor for motor oil formulations.

Features

- Excellent thermal stability
- Good resistance to combustion
- Good dielectric properties
- Low freezing point
- High compressibility
- Good oxidation resistance
- Absence of ageing under exposure to weather conditions
- Low variation of viscosity with temperature
- Good shear resistance
- Non-miscible with most of organic materials
- Soluble in aromatic, aliphatic and chlorinated solvents
- Insoluble in water and alcohols

Dosage Recommended

The recommended dosage is 30 to 50 ppm.

Prepare a master batch as follows:

Dodecylbenzene (Kerosene) 99.9 wt%
CHEMPOL 5177 0.1 wt%

The treat level range is between 0.030 to 0.050 wt% of the above master batch and depends on the quality of base oil being used.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Bright & Clear Liquid
Specific gravity @ 25 °C, g/ml	ASTM D 4052	0.973
Flash Point, (COC), °C	ASTM D 92	>300
Viscosity @ 25 °C, cSt	ASTM D 445	12500
Fire point, °C	ASTM D 92	>350
Pour Point, °C	ASTM D 97	-45
Refractive index @ 25 °C	-	1.404

Product packaging

Bulk, Drum.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL

ADDITIVES & CHEMICAL SPECIALITY



VISCOSITY INDEX IMPROVERS

VISCOSITY
INDEX IMPROVERS



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY



CHEMPOL

ADDITIVES & CHEMICAL SPECIALITY





CHEMPOL P30

Viscosity Index Improver

OCP-Olefin Co-polymer

Property	Value
Appearance	White pellets
Density (g/cc), ASTM D4052	0.86
Kinematic Viscosity 10% SN150/100(cSt), ASTM D445	2300
Pour Point 1% SN150 + 0.3% PPD (°C), ASTM 97	-33
Shear Stability Index (SSI), ASTM D6002	43
Ash Content (%), ASTM D1416	<0.1
Volatiles (%), ASTM D1416	<0.1

Characteristics

Pellet form
High thickening power
Good viscosity index improver (VII)
Very good pour point characteristics

Typical Applications

Designed to be used as a viscosity index improver (VII) and viscosity modifier/thickener in mineral oil based automotive crank case lubricants and industrial lubricants.

Packaging

Available in 25kg bag

Dissolving

Polymers should be dissolved under high agitation in oil at 100 °C - 160 °C for 3-6 hours until all solids have been dissolved. Treat rates of 6 -10% will be required depending upon viscosity grade required and base oil used. Use with suitable PPD. Consult CHEMPOL technical department for specific recommendations.

Safety, Handling and Storage

Wear suitable dust mask & gloves when handling polymers. Avoid storing pellet type polymers >30 °C for prolonged periods, avoid direct sunlight.



CHEMPOL P20

Viscosity Index Improver

OCP-Olefin Co-polymer

Property	Value
Appearance	White pellets
Density (g/cc), ASTM D4052	0.86
Kinematic Viscosity 10% SN150/100 (cSt), ASTM D445	1800
Pour Point 1% SN150 + 0.3% PPD (°C), ASTM 97	-24
Shear Stability Index (SSI), ASTM D6002	35
Ash Content (%), ASTM D1416	<0.1
Volatiles (%), ASTM D1416	<0.1

Characteristics

Pellet form
High thickening power
Good viscosity index improver (VII)
Very good pour point characteristics

Typical Applications

Designed to be used as a viscosity index improver (VII) and viscosity modifier/thickener in mineral oil based automotive crank case lubricants and industrial lubricants.

Packaging

Available in 25kg bag

Dissolving

Polymers should be dissolved under high agitation in oil at 100 °C - 160 °C for 3-6 hours until all solids have been dissolved. Treat rates of 6 -10% will be required depending upon viscosity grade required and base oil used. Use with suitable PPD. Consult CHEMPOL technical department for specific recommendations.

Safety, Handling and Storage

Wear suitable dust mask & gloves when handling polymers. Avoid storing pellet type polymers >30 °C for prolonged periods, avoid direct sunlight.



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL P25

Viscosity Index Improver

Ethylene-Propylene-Copolymer

Property	Value
Appearance	White pellets
Density (g/cc), ASTM D4052	0.862
Kinematic Viscosity 10% SN150/100 (cSt), ASTM D445	2100
Pour Point 1% SN150 + 0.3% PPD (°C), ASTM 97	-24
Shear Stability Index (SSI), ASTM D6002	45
Ash Content (%), ASTM D1416	<0.09
Ethylene Content (%)	48
Mooney Viscosity ML 1+4 (100°C), MU	65

Characteristics

Pellet form
High thickening power
Good viscosity index improver (VII)
Very good pour point characteristics

Typical Applications

Designed to be used as a viscosity index improver (VII) and viscosity modifier/thickener in mineral oil based automotive crank case lubricants and industrial lubricants.

Packaging

Available in 25kg bag

Dissolving

Polymers should be dissolved under high agitation in oil at 100 °C - 160 °C for 3-6 hours until all solids have been dissolved. Treat rates of 6 -10% will be required depending upon viscosity grade required and base oil used. Use with suitable PPD. Consult CHEMPOL technical department for specific recommendations.

Safety, Handling and Storage

Wear suitable dust mask & gloves when handling polymers. Avoid storing pellet type polymers >30 °C for prolonged periods, avoid direct sunlight.



CHEMPOL 5026

Viscosity Index Improver (Liquid Form)

Application

CHEMPOL 5026 is a shear-stable amorphous olefin copolymer intended for use as a VI improver when formulating multigrade crankcase and industrial oils. It has good low temperature performance and when combined with the proper pour point depressant gives superior pour point results. It is also available as a solid polymer.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Viscous liquid
ASTM Colour	ASTM D 6045	3.0
Specific gravity @ 15.6 °C, g/ml	ASTM D 4052	0.88
Flash Point COC, °C	ASTM D 92	>200
Viscosity @ 100 °C, cSt	ASTM D 445	420
Blend Viscosity @ 100 °C, cSt	ASTM D 445	8.9
SSI, %	ASTM D 6278	22
Ethylene content, wt%	-	52
Volatiles, wt%	-	1.0
Ash, wt%	-	0.1

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



DUTRAL® 5550 Viscosity Improver (Bale Form)

Application

Chempol 5550 is Olefin Co-Polymer (OCP) Viscosity Improver (VI) in solid form for formulating monograde and multigrade crankcase and various industrial lubricants. Chempol 5550 has medium Shear Stability when blended with suitable base oils. Treat rates depend upon application and performance requirements.

Product: Synthetic Olefin Co-Polymer OCP.

Chemical Name: Ethylene Propylene Co-Polymer.

Typical Characteristics

Property	Value
Appearance	White Bale
Density @ 15.6 °C, Kg/m ³	0.87
Volatiles Content wt%	0.2 max
Ash Content	0.4 max
MFI (190 °C, 216 Kg) (g/10 min)	8.3
Shear Stability Index (SSI) Max	24
Composition	
Ethylene wt%	52
Propylene wt%	48
YI %	16
KV (100 °C) cSt	10(1% wt in SN-150)

Characteristics

- High thickening power
- Good oxidative stability
- Excellent shear stability
- Good viscosity index improver (VII)
- Superior low temperature behaviour.

Packaging

Cardboard box of 500 kg containing 25 bales wrapped with polyethylene film (1070 x 1270 x h1050 mm).

Storage, Handling & Toxicity

When handling this product, a Maximum temperature of 90 °C should be observed for storage, unloading. However, it is strongly recommended that for long term storage the temperature should not exceed 70 °C. Blending temperature -120°C to 140°C Maximum skin Temperature- 200°C



DUTRAL® 5530

Viscosity Improver (Solid Form)

Application:

Chempol 5530 is Olefin Co-Polymer (OCP) Viscosity Improver (VI) in solid form for formulating monograde and multigrade crankcase and various industrial lubricants. Chempol 5530 has medium Shear Stability when blended with suitable base oils. Treat rates depend upon application and performance requirements.

Product:

Synthetic Olefin Co-Polymer OCP.

Chemical Name: Ethylene Propylene Co-Polymer.

Typical Characteristics

Property	Value
Density	0.860
Physical form	White Pellet
Volatiles Content wt%	0.2 Max
Molecular Weight Distribution	Medium
Mooney Viscosity ML (1+ 4)@100°C	25-35
Ash Content	0.4 max
MFI (230 °C, 216 Kg) (g/10 min)	4.5-8.5
Shear Stability Index (SSI) Max	24max
Composition	
Ethylene wt%	65-70
Propylene wt%	30-35

Characteristics

High thickening power
Good oxidative stability
Excellent shear stability
Good viscosity index improver (VII)
Superior low temperature behaviour.

Packaging

Cardboard packaging of 800 kg containing 40 Bags (1000X1200X h2090 mm)

Storage, Handling & Toxicity

Store in vented, dry area at temperatures between 20 °C and 30°C; no direct sunlight

Shelf life: 9 months



VISCOPOLY 1000

Highly Concentrated VI Improver

Description

VISCOPOLY 1000 is liquid viscosity Modifier having Shear Stability Index (SSI) 24 with excellent low temperature properties and less volatility. It is Olefin Co polymer (OCP) solubilized in GR III base oil, does not contain pour point depressant.

Composition

VISCOPOLY 1000 is a unique low viscosity emulsion based on ethylene and propylene copolymer in a carrier fluid

Application

VISCOPOLY 1000 is designed to formulate multigrade gasoline and diesel engine oils meeting the most stringent specifications set by SAE, particularly high-performance gasoline and diesel engine oils that requires Euro IV, V and VI, Low/mid SAP engine oils applications for stay in grade.

Recommended treat level % in mass.

Grade	5W-30	10W-30	10W-40	10W-50	15W-40	20W-40	20W-50
Treat Rate	7-12.5	5-8	9.5-14.5	15-22	8.0-10.5	1.5-5	7-10.5

Contact CHEMPOL Representative for accurate treat rate indications for specific applications

Typical Characteristics

Representative physical properties. (These do not constitute specifications.)

Property	Method	Value
Color	ASTM D1500	L0.5
Density @ 15 °C	ASTM D 4052	0.84
Flash Point, °C	ASTM D 92	210
Pour Point, °C	ASTM D 97	-12
Viscosity @ 100 °C, cSt	ASTM D 445	900-1100
Shear Stability Index, %	ASTM D 6278	24

Storage, Handling & Toxicity

Recommended maximum handling temperatures - short term storage and transfer 130°C and long-term storage 80°C. For specific safety, handling and toxicity information, please refer to the current Material Safety Data Sheet available from the company.



VISCOMAX

Highly Concentrated VI Improver

Application

VISCOMAX is shear stable ethylene – propylene polymers which is designed to be used as an engine oil additive. This product is designed to formulate multigrade gasoline and diesel engine oils meeting the most stringent specifications set by SAE. It is particularly useful to blenders located in remote areas or where climate conditions require the use of polymers with outstanding handling properties.

Composition

VISCOMAX is unique low viscosity emulsion based on ethylene and propylene copolymers in a carrier fluid.

Typical Characteristics

Representative physical properties. (These do not constitute specifications.)

Property	Method	Viscomax 1300	Viscomax 1800	Viscomax 2200
Appearance	Visual	Turbid solution	Turbid solution	Turbid solution
Color	Visual	Viscous Light Golden liquid	Viscous Light Golden liquid	Viscous Light Golden liquid
Density @ 15 °C	ASTM D 4052	0.84-0.87	0.84-0.87	0.84-0.87
Flash Point, °C	ASTM D 92	220	220	220
Viscosity @ 100 °C, cSt	ASTM D 445	1200-1400	1700-1900	2100-2300
Shear Stability Index, %	ASTM D 6278	24	24	24

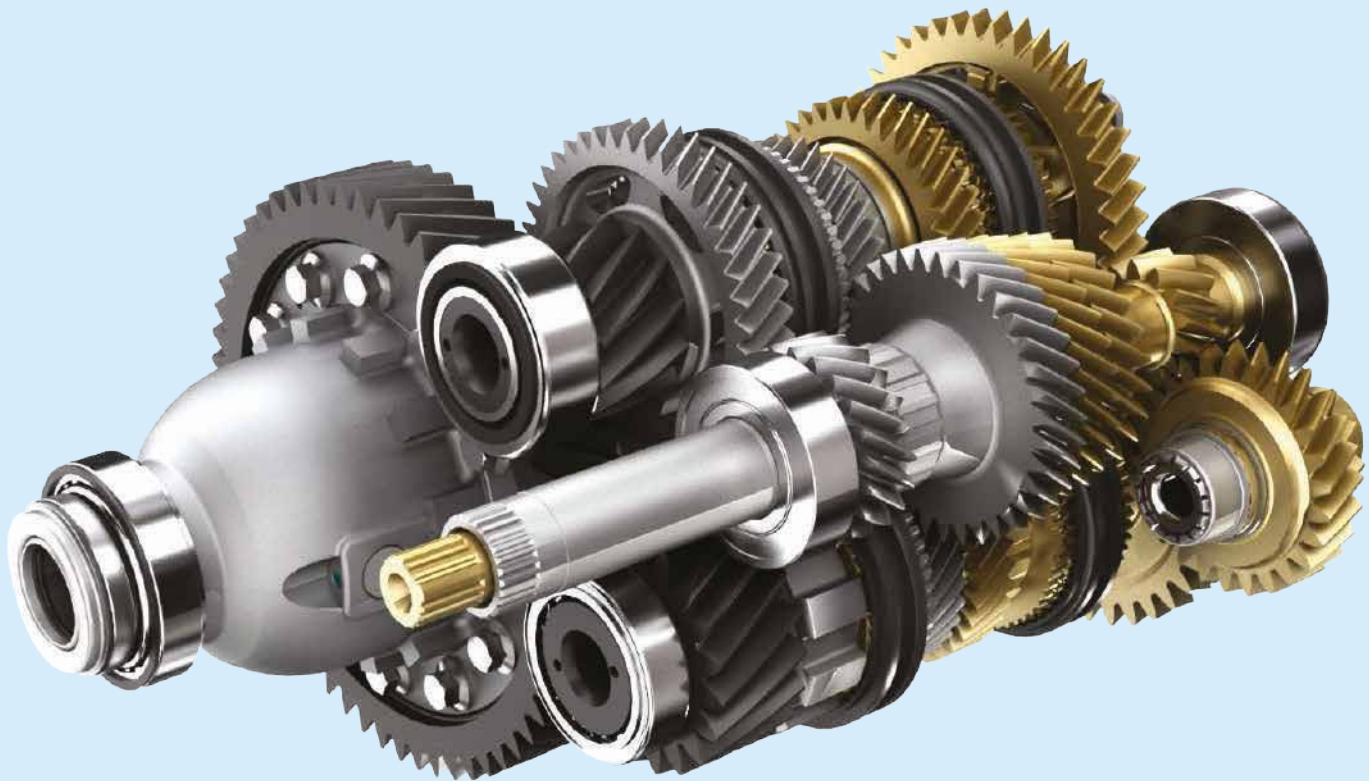
Storage, Handling & Toxicity

Recommended maximum handling temperatures - short term storage and transfer 130°C and long-term storage 80°C. For specific safety, handling and toxicity information, please refer to the current Material Safety Data Sheet available from the company.



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

TRANSMISSION OIL ADDITIVES



TRANSMISSION
OIL ADDITIVES





CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL 4155 Automotive Transmission Fluid Additive

Application

At the recommended treat rate of 8.5 mass % using appropriate Group II base stock, CHEMPOL 4155 produces an automatic transmission fluid suitable for use in most GM and Ford applications, all Allison C4 applications, and any other application calling for use of DIIIH/M quality ATF. CHEMPOL 4155 is based on a performance package that was licensed for GM and Ford DIIIH/M applications, along with Allison C4 applications.

Typical Characteristics

Property	Value	Unit	Method
Boron	670	ppm	ASTM D4951
Density @ 15 °C	912	kg/m ³	ASTM D4052
Flash Point °C	170	°C	ASTM D93
Viscosity @ 100 °C	270	cSt	ASTM D 445
Nitrogen	0.98	%(m)	ASTM D5291
Phosphorous	0.18	%(m)	ASTM D5185

Handling/ Precaution

Follow precautions normally taken for handling lube oil stocks. This product is temperature sensitive. Do not heat over the maximum loading / unloading temperature to avoid possible release of extremely odorous alkyl mercaptans and/or toxic hydrogen sulfide. For detailed data please refer to the relevant MSDS.





CHEMPOL 4373A Automatic Transmission Fluid Additive

Application

CHEMPOL 4373A multi-vehicle automatic transmission fluid (ATF) additive package is designed to formulate ATF for DEXRON®-VI, MERCON® LV, JASO 1 ALV.

Dosage Recommended (WT%)

The recommended dosage is 11 wt%.

Features

- Helps improve fuel economy
- Provides consistent shift performance for the life of the vehicle
- Extends transmission fluid life and prevents fluid breakdown at higher operating temperatures
- Fully synthetic (Group III)
- Reduces sludge and varnish build-up
- Protects transmission gears and allows them to operate smoothly
- Flows well for cold start-up
- Field tested performance

Typical Characteristics

Property	Method	Value
Appearance	Visual	Dark Brown Viscous Liquid
Specific gravity @15.6 °C, g/ml	ASTM D 1298	0.92
Flash point, PMC, °C	ASTM D 93	120
Viscosity @ 100 °C, cSt	ASTM D 445	70
Boron, wt%	ASTM D4951	0.068
Phosphorous, wt%	ASTM D5185	0.15
Sulphur, wt%	ASTM D4294	1.53

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL 4343 Manual Transmission Fluid Additive

Application

CHEMPOL 4343 is a premium grade, non-chlorine, extreme pressure additive system for manual gear oils. At the recommended treat rate of 4.2 %wt in suitable base stocks, it produces finished gear lubricants meeting API GL-5 service classifications.

At the lower treat rate of 2.1 %wt it will produce finished gear lubricants of a quality suitable for API service classification GL-4.

Typical Characteristics

Property	Method	Value
Specific gravity @15.6 °C, g/ml	ASTM D 4052	1.010
Flash point, PMCC, °C	ASTM D 93	100
Viscosity @ 100 °C, cSt	ASTM D 445	12.7
Sulphur, wt%	ASTM D 5185	26.5
Phosphorus, wt%	ASTM D 5185	1.3

Performance level	SAE Viscosity Grade	Mass %
API GL-5	90 w 140, 80 w 90, 85 w 140	3.8 – 4.2
API GL-4	90 w 140	2.0 – 2.1

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.





CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL 4373

High performance additive package for blending Multi-Vehicle Continuously Variable Transmission (CVT) fluids

Application

For blending in Group III base stocks to prepare fluids suitable for use in various CVT applications.
Recommended for use at: 7.5% by weight 6.6% by volume.

Typical Characteristics

	Minimum % Weight	Typical	Maximum % Weight
BORON	0.322	0.358	0.394
CALCIUM	0.287	0.319	0.351
NITROGEN	1.243	1.381	1.519
PHOSPHORUS	0.458	0.509	0.560
SULFUR	1.822	2.024	2.227

Handling/ Precaution

Max Handling Temp: 70°C
Shelf Life: 24 months at ambient temperature

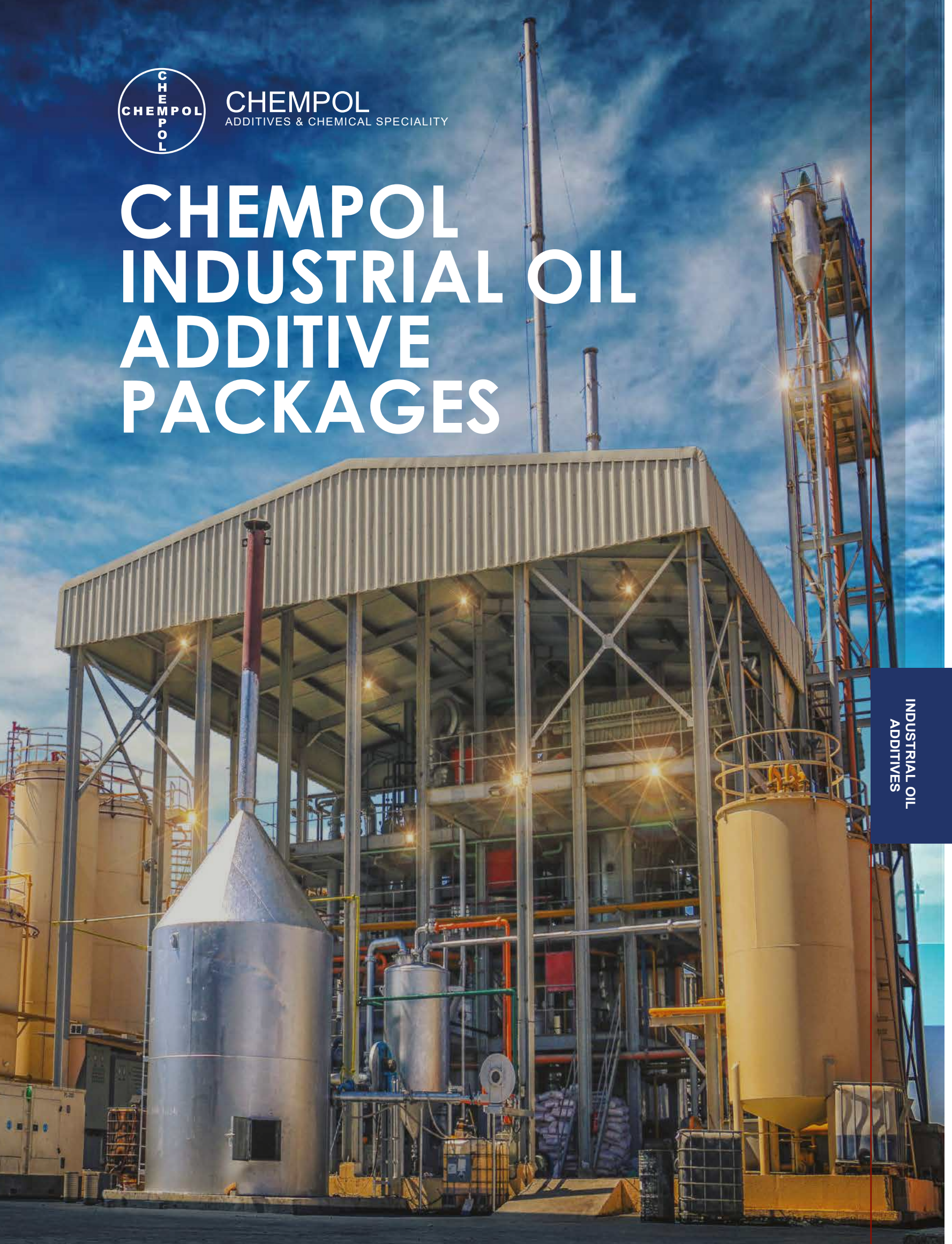




CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

CHEMPOL INDUSTRIAL OIL ADDITIVE PACKAGES

INDUSTRIAL OIL
ADDITIVES







CHEMPOL 5065 Additive Package

Type Ashless multifunctional oxidation and rust inhibiting additive package - for R&O oils, hydraulic fluids HL, gear oils CL according to: DIN 51524, part 1 (HL); DIN 51517, part 2 (CL); AFNOR NF E 48-603 (HL); Cincinnati-Machine P-38 (HL-32), P55 (HL-46), P-54 (HL-68), P-57 (HL-150), P-62 (FC-10) - for turbine oils according to: DIN 51515, part 1 (L-TD), part 2 (L-TG); ISO 8068; Siemens TLV 9013 04/01; British Standard BS 489; General Electric GEK 32568 F; MIL-L-17672 D; CEEB Standard 207001; Brown Boveri HTGD 90117; U.S. Steel 120; Westinghouse Electric Corp. Turbine Oil Spec.; Solar ES 9-224; Alstom HTGD 90117 V0001 S - for compressor oils according to: DIN 51506 (VBL, VCL, VDL); ISO / DP 6521 (DAA, DAB, DAH, DAG)

Technical data*

Composition	combination of antioxidants, corrosion inhibitors, non-ferrous metal deactivators
Appearance	light brown, clear, low viscosity liquid
Nitrogen	approx. 3.6 % weight
Sulphur	approx. 7.0 % weight
Phosphorus	approx. 0.5 % weight
Viscosity, 40 °C (ASTM-D 445)	approx. 80 mm ² /s
Density, 20 °C (ASTM-D 1298)	approx. 1000 kg/m ³
Flash point, COC (ASTM-D 92)	> 130 °C
Mineral oil content	approx. 5 % weight

Application

- R&O oils
- hydraulic fluids HL
- turbine oils
- gear oils CL
- compressor oils
- greases
- Heat Transfer fluid

Chempol 5065 is an ashless additive package with outstanding oxidation and corrosion inhibiting properties. Chempol 5065 is particularly recommended for use in the formulation of lubricants for which high performance demands have to be met:

- high oxidation stability
- good thermal stability
- excellent hydrolytic stability
- no sludge formation
- very low acid number
- good protection against corrosion of steel and non-ferrous metals
- good demulsifying behaviour
- good foam behaviour

These properties can be obtained at low treat level in a broad range of different base oils, especially in PAO, HC, HVI and Group II base oils. The recommended treat level is in the range of 0.3 to 0.6 % by weight. Depending on application Chempol 5065 may cause yellowish discolouration due to oxidative processes.

Solubility

Soluble in mineral oils, PAO, HC, HVI and Group II base oils. However, it is necessary to verify the solubility in the base oils used and the compatibility with other additives.

Test results

see technical report

Packing unit

200 kg drums

Storage conditions

in a dry place at room temperature approx. 24 months. This product is liable to crystallization at low temperatures. If this occurs, gentle warming up to 40 - 50°C with agitation will ensure homogeneity of the product without adverse effects. Local overheating - above 60 °C - must be avoided.

Handling

Consult material safety data sheet (MSDS) for additional handling information on Chempol 5065



CHEMPOL 5103

Water Soluble Cutting Fluid Additive

Multi-Purpose Emulsifier Base for Soluble Oils-Nitrite Free

Application

CHEMPOL 5103 has been formulated to meet the requirements for the preparation of soluble oils from paraffinic and naphthenic base oils, which will give stable milky emulsions in all types of water. It is also suitable as the base for the preparation of translucent semi-synthetic micro-emulsions and also heavy-duty EP emulsions.

It is a blend of emulsifying agents, wetting agents, and rust inhibitors, together with solvent refined mineral oils. It also contains biocides and fungicide additives to give the finished soluble oils long service life, prevent emulsion breakdown and spoilage.

It is an extremely versatile product for medium-cutting operations, provides all the lubrication and cooling properties necessary to ensure good work piece finish, and extended tool life. It is suitable on ferrous and non-ferrous metals in turning, milling, drilling, tapping, threading and cold sawing operations.

Typical Characteristics

Property	Method	Value
ASTM Colour	ASTM D 6045	Brown
Specific gravity @ 20 °C, g/ml	ASTM D 4052	0.98
Total Acid Number, mg KOH/g	ASTM D 664	38

For improved emulsion stability the concentrate can be adjusted for the base oil used by addition of more acid (Olein, Tall oil Distillate) or by more alkali (Triethanolamine, Potassium Hydroxide).

Soluble oil formulations based on CHEMPOL 5103:

Typical opaque soluble oil formulations

A treat rate of 15-20 % wt in paraffinic base oils yields a concentrate, which forms stable emulsions (5%) in medium hard water. The pH-value of a 5% emulsion is between 8.5-8.8. The addition of biocide is recommended.

• Suggested minimum treatment levels of CHEMPOL 5103 in base oil:

150 SUS Paraffinic Oil:	from 15 % w/w
100 SUS Paraffinic Oil:	from 17 % w/w
100 SUS Naphthenic Oil:	from 15 % w/w

Emulsion Characteristics

Stability of 5 % emulsion	stable milky
PH of 5 % emulsion	8.7
Corrosion test IP.287	20:1 Pass

• Semi-synthetic formulation

CHEMPOL 5103	50% w/w
100 SUS Naphthenic oil	48% w/w
Triethanolamine	2% w/w

• EP Soluble oil formulation

CHEMPOL 5103	40% w/w
100 SUS Naphthenic oil	50% w/w
Chlorined paraffin	10% w/w

Emulsion Characteristics

Appearance	Transparent
Corrosion test IP.287	50:1 Pass

Emulsion Characteristics

Corrosion test IP.287	20:1 Pass
-----------------------	-----------

Note: for improved emulsion stability in these formulations the concentrate can be adjusted for the individual base oil used by addition of more acid (eg. Distilled Tall Oil) or by more alkali (eg. Potassium Hydroxide). Supplementary biocides are customarily added to the finished product.

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 5022 Antiwear Hydraulic Additive Package

Application

CHEMPOL 5022 additive is designed for the formulation of hydraulic oils. In addition to superior wear control, the product imparts rust and oxidation inhibition to the oil. CHEMPOL 5022 additive is a flexible package suitable for both premium quality and economic performance levels through an appropriate choice of dosage.

Dosage Recommended (WT%)

The recommended dosage for CHEMPOL 5022 additive is as follows:

- 0.3 % to 0.5 %wt for minimum antiwear performance in high leakage system.
- 0.6 % to 0.75 %wt for economic hydraulic oil requiring wear and oxidation protection.
- 0.8 % to 1.0 %wt for premium hydraulic oils meeting major National and International Specifications.
- 1.25 %wt to formulate hydraulic oil meeting requirements for long drain applications with increased load carrying abilities.

Features

- Outstanding wear protection, as manifested by performance in the 35VQ25 pump exceeding Vickers requirements.
- Good filterability.
- Security and confidence from a product with an extensive history of trouble – free performance worldwide.

Typical Characteristics

Property	Method	Value
Appearance	Visual	Amber Oily Liquid
Specific gravity @15.6 °C	ASTM D 4052	1.06
Flash point (PMCC), °C	ASTM D 93	110
Viscosity @ 40 °C, cSt	ASTM D 445	125
Zinc, %wt	ASTM D 5185	7.25
Phosphorus, wt%	ASTM D 5185	6.30

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL 51810

Knitting Oil Emulsifier

Application

- CHEMPOL 51810 is non ionic soluble emulsifier additive for all type of fibers & textile knitting applications.
- CHEMPOL 51810 is compatible with all type of paraffinic base oils having viscosity of sn 70 to sn 150.
- CHEMPOL 51810 is non ionic antistatic emulsifier for making soluble oils for applications in fibre, textile machines and machine industries.
- CHEMPOL 51810 contains detergent, dispersant, antibacterial, anticorrosion characteristics
- CHEMPOL 51810 can be used in mineral base oils paraffinic type to meet requirements.
- Treat dosage in mineral base oil (viscosity @40°C 32cst and 18 cst) is approx. 10 +/- 2 %. Which formulation gives emulsion in water @ 5 % (1:20).
- Milky emulsion produced is stable and passes IP 263 with hard water and passes iron chip test

Typical Characteristics

Property	Value
APPEARANCE	COLORLESS LIQUID
TAN mg KOH/gm	0.1
VISCOSITY, CST @100°C	4-7
FLASH POINT COC °C	180
DENSITY @ 15°C, gm/cc	0.9
EMULSION STABILITY	STABLE FOR 24 HRS
(@7.0% W/W IN OIL)	
PH OF THE EMULSION @3%wt of oil	7-8
STORAGE TEMP °C	MAX. 50°C
BLENDING TEMPERATURE	MAX. 60°C
STORAGE STABILITY	2 YRS WITH PROPER CONDITIONS

Dosage Recommended (WT%)

7.0-9.0% in SN 70 Group I/II Base Oil
13.0-16.0% in SN 150 Group I/II Base Oil

Handling/ Precaution

When handling this product a MAXIMUM temperature of 60°C should be observed for storage, unloading and blending. However, it is strongly recommended that for long-term storage the temperature should not exceed 50°C. For detailed data, please refer to the relevant MSDS.



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY

SPECIALITY CHEMICALS

SPECIALITY
CHEMICALS





CHEMPOL BRAKE FLUIDS **(Brake Fluid DOT 3, 4 & 5.1)**

Description

CHEMPOL Brake Fluids are premium quality, non-silicone, non-mineral/petroleum based, fully synthetic brake fluid designed for use in a wide range of brake and clutch applications. It offers superior dry and wet boiling points and maintains viscosity in cold and hot environments.

Applications

Recommended for re-fill or top-up of brake and clutch systems in passenger cars, 4WD's, motorcycles, light and heavy duty commercial vehicles, mining, construction and agricultural equipment that require a non-petroleum based brake & clutch hydraulic fluid.

DOT 5.1 Suitable for use where the vehicle manufacturer specifies either DOT 3, DOT 4, or DOT 5.1 fluids. It is also suitable for use with all types of seals, hoses and other brake and clutch system parts. Low viscosity (at -40C), for faster fluid circulation in micro-valves of ABS systems

DOT 4 Suitable for use where the vehicle manufacturer specifies DOT 3 or DOT 4 brake fluid. Better performance for life of fluid compared to DOT 3 fluids.

DOT 3 Suitable for use where the vehicle manufacturer specifies DOT 3 brake fluid.

NOTE: Intermixing of brake fluids of different grades is not recommended. Intermixing may impact braking performance of some brake systems. This product is not miscible with silicone based brake fluids. This product is not compatible with any mineral or synthetic oil based fluids

Product Benefits

- Excellent braking response due to high boiling point of fluid.
- High wet boiling point ensures long term retention of fluid performance.
- Better performance for life of fluid.
- Compatible with all common brake system materials
- Borate esters to scavenge water and maintain ERBP as the fluid ages
- Anti-corrosion properties: complete brake system protection.
- Elastomer compatibility: no leakage or fluid losses.

Recommendations / Specifications

DOT 5.1 - FMVSS 116 DOT 5.1, DOT 4 and DOT 3, SAE J1703/ J1704, ISO 4925 (Class 5.1, 4 & 3)

DOT 4 - FMVSS, No. 116, DOT 4 and DOT 3, SAE J1703/J1704, ISO 4925 Class 4&3

DOT 3 - FMVSS No 116 DOT 3, SAE J1703, ISO 4925 Class 3, AS 1960-2005 Grade 1

Meets the quality requirements of European Manufacturers

Typical Characteristics

	DOT 5.1	DOT 4	DOT 3
Density at 20°C, g/ml, ASTM D4052	1.069	1.040	1.031
Kinematic Viscosity at -40°C, mm ² /s, ASTM D445	810	1200	1300
Kinematic Viscosity at 100°C, mm ² /s, ASTM D445	2.16	2.6	2.4
Dry ERBP (FMVSS No. 116) S.11, °C (min.)	275	263	240
Wet ERBP (FMVSS No. 116) S.12, °C (min.)	187	165	150
pH (FMVSS No. 116) S.14	7.5	8.5	9.0
Boron	-	1.30 mass %	-
Corrosion Test @ 100°C for 120hrs	passes test	passes test	passes test

Storage Stability

Storage time is up to three years in sealed, metal, bulk containers. Protection should be provided to prevent any moisture contamination. Moisture contamination will result in a 5–10°C boiling point drop for each 0.1% of water absorbed.



CHEMPOL GLYCOLS

CHEMPOL GLYCOLS are clear, low-volatility, mobile liquid with a very faint, mild odour. It is miscible with many common solvents, e. g. aliphatic hydrocarbons, alcohols, ketones, aldehydes, ethers, glycols, glycol ethers and water. Butyl glycol may form peroxides, if it comes into contact with atmospheric oxygen

Applications

- A low-volatility solvent component in various paint systems to improve gloss and levelling
- An additive for metal degreasers and floor cleaners etc.
- A co-solvent for printing inks, stamp-pad inks, writing and drawing inks
- Additive for brake fluids. (Note: Butyl glycol can cause seals to swell if added in large amounts)
- An intermediate in the manufacture of plasticizers
- An ingredient for cutting oils

Technical Properties

Parameters	BDGE	BTG
Pt/Co color value, Maxt	10	50
Density @ 20°C (g/cm ³)	0.952- 0.956	0.990 – 0.998
Viscosity @ 20°C (mPa•s)	NA	10-11
Boiling range °C	228-232	265 – 350
Refractive index n _{20D}	1.431-1.433	1.440 – 1.442
Evaporation rate, Approx.	3500	8000
Flash point °C	NA	131
Ignition temperature °C	NA	202
Water %,max	0.1	0.1

Storage & Handling

CHEMPOL GLYCOLS should be stored under nitrogen. The storage temperature must not exceed 40°C and moisture are excluded. Under these conditions, a storage stability of minimum 12 months can be expected.



CHEMPOL BLUE DYES

Typical Characteristics

Property	Method	Value
Odour	Typical	Aromatic
Appearance	Visual	Dark Blue Liquid
Specific Gravity @15.6 °C, g / ml	ASTM D 4052	0.93 – 0.98
Flash Point (PMCC), °C	ASTM D 93	> 28
Boiling Point, °C	-	> 140
Active Matter, wt%	-	50
Solvents, wt%	-	40

Chemical Properties:

Solvent Chemistry: Xylene / Dimethyl Benzene / Alkyl Benzene

Physical Properties:

Solubility:

- Water - Insoluble
- Benzene - Soluble
- Xylene - Soluble
- Oils - Soluble

CHEMPOL YELLOW DYES

Typical Characteristics

Property	Method	Value
Odour	Typical	Aromatic
Appearance	Visual	Dark Yellow Liquid
Specific Gravity @15.6 °C, g / ml	ASTM D 4052	0.991
Flash Point (PMCC), °C	ASTM D 93	63
Insoluble Matter in toluene, wt%	-	0.81
Moisture Content, wt%	ASTM D 6304	0.11

Chemical Properties:

Solvent Chemistry: Xylene / Dimethyl Benzene / Alkyl Benzene

Physical Properties:

Solubility:

- Water - Insoluble
- Benzene - Soluble
- Xylene - Soluble
- Oils - Soluble



CHEMPOL RED DYES

Typical Characteristics

Property	Method	Value
Odour	Typical	Aromatic
Appearance	Visual	Dark Red Liquid
Specific Gravity @15.6 °C, g / ml	ASTM D 4052	0.981
Flash Point (PMCC), °C	ASTM D 93	58
Insoluble Matter in Toluene, wt%	-	0.28
Moisture Content, wt%	ASTM D 6304	0.25

Chemical Properties:

Solvent Chemistry: Xylene / Dimethyl Benzene / Alkyl Benzene

Physical Properties:

Solubility:

- Water - Insoluble
- Benzene - Soluble
- Xylene - Soluble
- Oils - Soluble

CHEMPOL GREEN DYES

Typical Characteristics

Property	Method	Value
Odour	Typical	Aromatic
Appearance	Visual	Dark Green Liquid
Specific Gravity @15.6 °C, g / ml	ASTM D 4052	0.986
Flash Point (PMCC), °C	ASTM D 93	63
Insoluble Matter in Toluene, wt%	-	0.34
Moisture Content, wt%	ASTM D 6304	0.11

Chemical Properties:

Solvent Chemistry: Xylene / Dimethyl Benzene / Alkyl Benzene

Physical Properties:

Solubility:

- Water - Insoluble
- Benzene - Soluble
- Xylene - Soluble
- Oils - Soluble



CHEMPOL BROWN DYES

Typical Characteristics

Property	Method	Value
Odour	Typical	Aromatic
Appearance	Visual	Dark Brown Liquid
Specific Gravity @15.6 °C, g / ml	ASTM D 4052	0.93-0.98
Flash Point (PMCC), °C	ASTM D 93	>28
Boiling Point, °C	-	>140
Active Matter, wt%	-	50
Solvents, wt%	-	40

Chemical Properties:

Solvent Chemistry: Xylene / Dimethyl Benzene / Alkyl Benzene

Physical Properties:

Solubility:

- Water - Insoluble
- Benzene - Soluble
- Xylene - Soluble
- Oils - Soluble





GREASE ADDITIVES



GREASE
ADDITIVES



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY





CHEMPOL G - HCO (Hydrogenated Castor Oil)

Hydrogenated Castor Oil (HCO), also called Castor Wax, is a hard, brittle, high melting solid which is tasteless and odorless. It is insoluble in water and solubility in many organic solvents is also very limited. HCO is available as flakes or powder which melts to a clear transparent liquid. It is a non-toxic, non-hazardous material. HCO is used in manufacturing of greases and lubricants.

Typical Characteristics

Parameters	Value
Appearance	White Flakes/Powder
Colour Gardner	1 to 2
Acid Value % (mgKOH/gm)	1 to 3
Iodine Value gI ₂ /100g	3 to 4
Hydroxyl Value (mgKOH/gm), Min	157
Saponification Value , Min	178
Melting Point ° C	84 - 88
Unsaponifiable Matter, Max	1.0
Nickel , PPM	3 - 5
12 HSA %	82 - 87
12 Keto Stearic Acid, Max	4
Flash Point ° C , Min	218

CHEMPOL G – 12 HSA (12 Hydroxy Stearic Acid)

12-Hydroxy Stearic Acid is the mixed fatty acid obtained by hydrolysis of Hydrogenated Castor Oil. It is high melting, brittle, waxy solid at ambient temperatures. It should be stored away from heat to avoid deterioration. It is insoluble in water and its solubility in many organic solvents is also limited. It is a non-toxic, non-hazardous material. It is used in the manufacturing of greases.

Typical Characteristics

Parameters	Value
Appearance	Off White Flakes/Powder
Colour Gardner	3 to 7
Acid Value % (mgKOH/gm)	175 - 185
Iodine Value gI ₂ /100g	3 to 4
Hydroxyl Value (mgKOH/gm), Min	157
Saponification Value , Min	180
Melting Point ° C	72 - 78
Unsaponifiable Matter, Max	1.0
Nickel , PPM	3 - 5
12 HSA %	83 - 87
12 Keto Stearic Acid, Max	4



CHEMPOL G – Lithium Hydroxide (Lithium 12-hydroxystearate)

Lithium 12-hydroxystearate (C₁₈H₃₅LiO₃) is a chemical compound classified as a lithium soap. In chemistry "soap" refers to salts of fatty acids. Lithium 12-hydroxystearate is a white solid. Lithium soaps are key component of many lubricating greases. Lithium 12-hydroxystearate exhibits high oxidation stability and a dropping point up to around 200 °C. Most greases used today in motor vehicles, aircraft, and heavy machinery contain lithium stearates, mainly lithium 12-hydroxystearate. Greases can be made with the addition of several different metallic soaps. Some greases are prepared from sodium, barium, lithium, and calcium soaps. Lithium soap greases are preferred for their water resistance, and their oxidative and mechanical stability. Depending on the grease, they also have good performance at high or low temperatures.

Typical Characteristics

Parameters	Value
Appearance	White Powder
Melting Point ° C, Min	>200
Molecular Weight, g/Mol	306.41

CHEMPOL G – Clay (Bentonite Clay)

Bentonite Clay/ powder used as a non-soap thickener in manufacturing of greases. Organophilic clay thickeners include the minerals bentonite. These minerals are purified to remove any non-clay material, ground to the desired particle size distribution, and then chemically treated to make the particles organophilic (more compatible with organic chemicals). Bentonite Clay particles are then dispersed in a fluid lubricant to form grease. Clay particles must be activated with a polar material to stabilize the thickener structure. No chemical reaction takes place in the production of clay thickened greases. Clay thickeners have no defined melting point, so they have been used historically in high-temperature greases.

Typical Characteristics

Parameters	Value
Appearance	Powder
Moisture, % Max	3
Loss On Ignition (LOI) %	28 - 33

CHEMPOL G – Tallow Tallow (Fatty Acid/Animal Fat)

Tallow based product has a wide variety of functions. This product is used as a lubricity additive in greases and lubricants. It works as a humectant, emollient, gelling agent, flotation aid, release aid and is often used as a chemical intermediate and processing aid.

Typical Characteristics

Parameters	Value
Acid Value (mgKOH/gm)	200 - 208
Iodine Value gI ₂ /100g	40 - 62
Titer ° C	38 - 45
Saponification Value , Min	200
Composition % : C8,C10,C12,C14,C16,C18-1,C18-2 & C18-3	<0.5,<0.5,<1.5,2,25,20,43,5 & 1

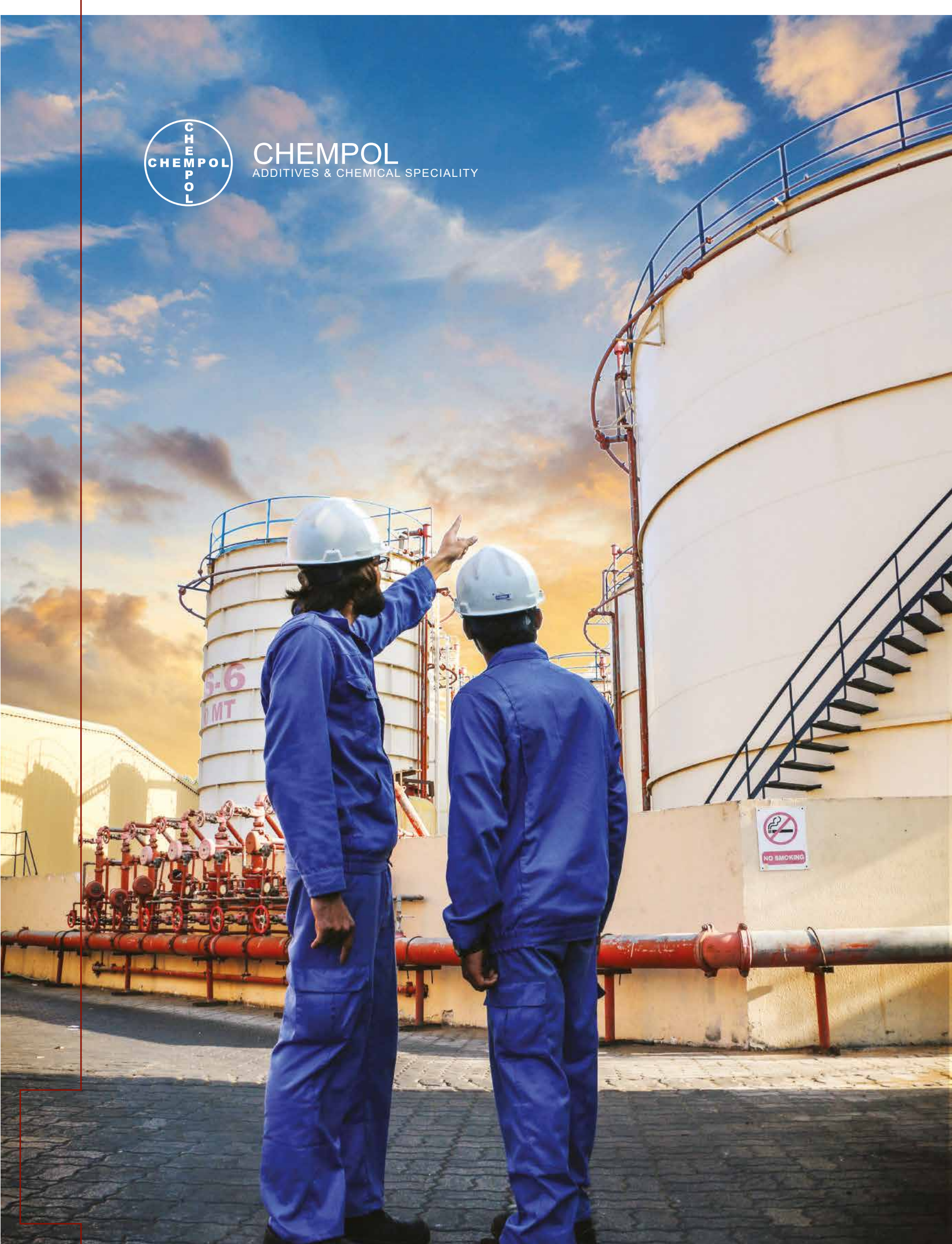
SYNTHETIC OILS



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY



CHEMPOL
ADDITIVES & CHEMICAL SPECIALITY





SYNTHETIC OILS PAOs(PolyAlphaolefin)

(Highly Branched Isoparaffinic PolyAlphaolefin)

SYNTHETIC OIL PAOs are specially designed chemicals that are uniquely made from alpha olefins. These stable molecules are produced by steam cracking hydrocarbons to produce ultra-high-purity ethylene, Ethylene oligomerization to develop 1-decene and 1-dodecene & Decene or dodecene oligomerization to form a mixture of dimers, trimers, tetramers and higher oligomers.

Applications

SYNTHETIC OIL PAOs can be used in many industrial and automotive lubricant applications. These include gear oils, compressor oils, engine oils, hydraulic fluids, greases, and other functional fluids.

Features & Benefits

- Greater oxidative stability
- Superior volatility
- Excellent low-temperature viscosities
- Consistent, quality base stock
- Extremely high viscosity index
- Excellent pour points
- Pure petrochemical feed stocks

Typical Characteristics

Property	Value				
Viscosity Grade	2	4	8	65	150
Appearance	C & B	C & B	C & B	C & B	C & B
Color, Pt-Co	0	0	0	0	0
Odor	No Foreign	No Foreign	No Foreign	No Foreign	No Foreign
Specific Gravity, 60°F / 15.6°C	0.7981	0.8190	0.8326	0.8460	0.849
Kinematic Viscosity, cSt @ 212 °F, 100°C	1.7	3.9	7.8	65	156
Kinematic Viscosity, cSt @ 104°F, 40°C	5.1	16.8	46.4	605	1719
Kinematic Viscosity, cSt @ -40°F, -40°C	260	2498	19574	-	-
Viscosity Index	-	124	138	181	205
Pour Point, °C	-73	-68	-56	-46	-39
Flash Point (COC), °C	158	226	262	266	278
Bromine Index	<200	<200	<200	<400	<400
Total Acid Number	<0.03	<0.03	<0.03	-	-
Volatility, Noack , wt%	-	13.4	3.5	-	-



SYNTHETIC OILS Ester

(Di, Poly & Complex Ester)

SYNTHETIC OIL Ester are common Group V base oils used in different lubricant formulations to improve the properties of the existing base oil. Ester oils can take more abuse at higher temperatures and will provide superior detergency compared to a PAO synthetic base oil, which in turn increases the hours of use.

Applications

SYNTHETIC OIL Ester can be used in many industrial and automotive lubricant applications. These include gear oils, compressor oils, engine oils, hydraulic fluids, turbine fluids, greases, chain lubricants, and other functional fluids.

Features & Benefits

- Resistant to thermal breakdown
- Good metal-wetting ability
- High film strength
- Good shear stability
- Superior low-temperature performance, low volatility

Typical Characteristics

Property	Value				
Synthetic Oil ES	ES-32	ES-10	ES-100	ES-68	ES-320
Appearance	C & B	C & B	Clear yellow	Clear yellow	Clear yellow
Specific Gravity, 60°F /15.6°C	0.909	0.916	0.990	0.918	0.932
Kinematic Viscosity, cSt @ 100°C	5.3	2.5	14.4	13	42
Kinematic Viscosity, cSt @ 40°C	26.7	8.4	112	71	326
Viscosity Index	135	127	155	184	176
Pour Point, °C	-57	-36	-49	-42	-39
Flash Point (COC), °C	236	210	300	>300	>300
Hydroxyl Value, mgKOH/g	<2	<2	<12	<15	<15
Acid Value, mgKOH/g	<0.03	<0.03	<0.05	<2	<1
Volatility, Noack , wt%	7	31	2.0	1.4	<1



CHEMPOL

ADDITIVES & CHEMICAL SPECIALITY

United Kingdom

136 Eastern Avenue, Redbridge, Essex, England IG4 5AG
+44-7459586511

info@chempol.co.uk | chempol.co.uk