



## Castrol Alpha SP S Range

Industrial Extreme Pressure Gear Oil

### Description

Castrol Alpha™ SP S gear oils are high-quality mineral oil-based EP transmission oils (CLP) with enhanced VCI-based corrosion protection with a closed gear protection period of up to 24 months.

### Application

Castrol Alpha SP S oils are recommended for lubrication of industrial gearboxes with forced circulation or spray and oil bath lubrication. They are usually used in the transmission test field after final gearbox assembly.

Remaining quantities in the gearbox ensure sufficient long-term corrosion protection for the time of storage, customer transport until commissioning.

Alpha SP S oils are not designed for long-term continuous operation in gearboxes.

### Recommendations in use

Due to the volatility of the vapour corrosion inhibitor (VCI), the gearboxes must always be hermetically sealed. In open oil circulation systems, there may be a reduction in VCI content over a long period of time. To extend the internal corrosion protection of gearboxes or with reduced VCI content in circulating systems, the addition of Castrol inhibitor N 213 is recommended.

To determine the amount of residual oil required for adequate corrosion protection in the gearbox and when using Corrosion Inhibitor N 213, contact Castrol Technical Support.

Material compatibility tests should be carried out in run-in processes with elevated temperature profiles, especially in combination with non-ferrous metals

### Storage conditions

Depending on different storage conditions, the settling of some additives is possible. Please be sure to homogenize the liquid before use.

### Advantages

- Very good corrosion protection properties against iron and steel components.
- Up to 24 months of corrosion protection in closed gearboxes (depending on storage conditions).
- Sufficient load-capacity in accordance with the requirements of DIN 51517 Part 3.
- Good demulsifying behavior.
- Neutral behavior compared to conventional sealing materials.
- Formulated without silicone-containing formulation components

## Typical Characteristics

Name	Method	Units	Alpha SP 150 S	Alpha SP 220 S
ISO Viscosity Grade	-	-	150	220
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	890	890
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	150	220
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	14.7	18.7
Viscosity Index	ISO 2909 / ASTM D2270	-	95	95
Pour Point	ISO 3016 / ASTM D97	°C/ °F	-18/ 0	-18/ 0
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml/ml	50/0	50/0
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/ °F	175/ 347	175/ 347
Rust test - synthetic seawater (24 hrs)	ISO 7120 / ASTM D665B	-	Pass	Pass
Copper corrosion (3 hrs@100°C/ 212°F)	ISO 2160 / ASTM D130	Rating	<2	<2
FZG Gear Scuffing test - A/8.3/90*	ISO 14635-1	Failure Load Stage	≥12	≥12

\* Tested without VCI inhibitor. Subject to usual manufacturing tolerances.

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