



The Ultimate Lubricant

# 515



Nonfood Compounds  
Category Code : H1  
Registration Number : 150297

## DESCRIPTION:

Omega 515 Ultra Dura Synthetic FG Compressor Oil is an ultra-durable compressor oil quality designed to protect and lubricate commonly used compressors, particularly reciprocating compressors in the food & beverage industry. It is formulated with dual synthetic base fluids (including Alkylated Naphthalene synthetic fluid) and Omega's proprietary, record-proven package of additives for compressors to ultimately reduce the overall maintenance cost by extended oil interval, reduced level of contamination and improved oil consumption rate.



Appearance, texture and colors depicted in this photo are for indicative purpose only.

## NEW CHEMICAL TECHNOLOGY – NEW PERFORMANCE LEVEL:

Compressors in the food and beverage industry are constantly exposed to harsh operating conditions such as high temperatures and wet operating conditions. The demanding maintenance professionals expect high-performance lubricating oils for these machines to possess superb thermo-oxidative and hydrolytic stability to deliver reliable and prolonged protection and lubrication. Quality designed to outperform other synthetic food grade compressor oils, Omega 515 surely can meet and even exceed these challenging requirements.

Omega 515 is formulated with an innovative chemical technology using synthetic base fluids meeting the requirement for incidental food contact as prescribed by FDA 21 CFR 178.3570. Alkylated Naphthalene (AN), a highly chemically stable synthetic fluid, is blended synergistically with Polyalphaolefins (PAO) to take Omega 515 to a new level of premium performance.

The “dual synthetic base fluids” formulation provides Omega 515 with outstanding built-in thermo-oxidative stability. Alkylated Naphthalene is a highly chemically stable synthetic fluid. The electron-rich naphthalene rings of Alkylated Naphthalene are capable of trapping the oxidizing radicals and thus disrupt the oxidation chain process, preventing the oxidative degradation even at high temperatures.

Air compressor oils are also exposed to moisture during normal operation or to condensation as the equipment cools after a shut down. Hydrolytic stability, the ability of a lubricant to resist chemical decomposition in the presence of water, is another important property for determining the stability of compressor oils. Omega 515 is extremely hydrolytically stable because Alkylated Naphthalene does not contain reactive functional groups that chemically react with water.

With the built-in outstanding properties mentioned above, Omega 515 greatly reduces the risk of accumulation of carbon deposits and corrosive acids caused by oxidation and reaction with moisture in the compressors, thus significantly improves the re-lubrication intervals. Depending on the operating conditions, Omega 515 is capable of sustaining its high performance up to 16,000 hours (sixteen thousand hours).

## OTHER EXCELLENT FEATURES:

In addition to the thermo-oxidative and hydrolytic stability, Omega 515's special "dual base fluids" formulation also offers the following excellent chemical and physical properties:

- a) Low volatility – Omega 515 significantly reduces loss of oil due to evaporation and thus optimizes oil consumption. It also means there is less oil to remove in the air/oil separators and fewer air filter changes.
- b) Superb compatibility with most elastomers or sealing materials – Omega 515 minimizes the risk of oil leakage due to deformation of sealing materials. This also improves the oil consumption rate.
- c) Excellent demulsibility – Omega 515 separates condensed water quickly and completely, thus preventing the risk of water contamination. d/ High flash and fire points – Omega 515 performs well at high temperatures over 200°C. Combined with its extremely low carbon deposits forming tendency, this excellent property of Omega 515 lowers the risk of fire and explosion due to compressor overheat.
- d) Low pour point – Omega 515 offers excellent lubricity and maintains designed viscosity at extremely low temperatures. This results in excellent cold-temperature starting to guarantee efficient compressor performance regardless of temperature change.
- e) Omega 515 is listed by NSF as H-1 lubricant for incidental contact with food.

## EXTRA PROTECTION:

Omega 515 is fortified with Omega's new proprietary package of additives, an improved version based on the technology of other successful Omega compressor oils. This special package contains various performance-enhancing additives (e.g. anti-wear additive, antifoaming agent and corrosion inhibitor, etc.) to provide extra-protection to the compressors.

## APPLICATIONS:

Omega 515 is recommended for providing ultra-long protection and lubrication to all types of oil-lubricated centrifugal and positive displacement compressors (especially reciprocating compressors) subjected to arduous working conditions in the food and beverage processing industry.

**Note:** Follow equipment manufactures' instruction and recommendation when applying Omega 515.

**TYPICAL DATA:**

TEST	ASTM TEST METHOD	TEST RESULT
		ISO VG100
Appearance	--	Light Yellow
Density	D-1298	0.848
Viscosity, cSt @ 40°C	D-445	100
Viscosity, cSt @ 100°C	D-445	13.8
Viscosity Index	D-2270	139
Pour Point °C	D-97	-42
Flash Point, COC, °C	D-92	260
TAN, mg KOH/g	D-974	0.7
Foaming Characteristics:-		
Sequence 1/2/3	D-892	Nil
Copper Strip Corrosion	D-130	1b
Rust Characteristics	D-665	Pass
Evaporation Loss, 6.5 hours @ 205°C, % Mass	D-972	2.7

The characteristics given above are typical of current production only and slight batch to batch variations should be expected.