

# Product Data Sheet

## NA-LUBE<sup>®</sup> AO-210



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**NA-LUBE AO-210** is a general purpose ashless phenolic antioxidant for industrial lubricants, greases, transformer oils and fuels.

### CHEMICAL

**COMPOSITION:** 2,6-di-tert-butylphenol.

**APPEARANCE:** Pale yellow crystalline solid below 36°C. Clear liquid above 36°C.

### TYPICAL

<b>PROPERTIES:</b>	Color, Molten (APHA)	< 100
	Density @ 15.6°C (ASTM D 4052)	0.91 g/ml
	Weight Per Gallon @ 25°C	7.6 lbs
	Melting Point (ASTM D 1519)	36°C (97°F)
	Flash Point, COC (ASTM D 92, DIN 51 376)	>100°C (> 212°F)

Note: The above analytical data are not specifications.

	<u>Typical Treat Levels</u>
<b>APPLICATIONS:</b> Hydraulic Oils	0.1% - 0.3%
Paper Machine Oils	0.1% - 0.5%
Circulating Oils	0.1% - 0.5%
Compressor Oils	0.3% - 1.0%
Gear Oils	0.2% - 0.4%
Polyglycol Based Products	0.5% - 1.0%
Transformer Oils	0.2% - 0.5%
Automotive Gasoline	5 - 15 ppm

**NA-LUBE AO-210** is a 100% active phenolic antioxidant. **NA-LUBE AO-210** is much less volatile than the phenolic antioxidant BHT; thus, it can be used for high temperature lubricants and greases. The oxidation stability of industrial and automobile lubricants and greases can be easily improved by using **NA-LUBE AO-210** in combination with aminic antioxidants such as NA-LUBE AO-110 or NA-LUBE AO-130, appropriate yellow metal deactivators and an ashless rust inhibitor such as K-CORR<sup>®</sup> 100A2. Usually a ratio of 1:1 of **NA-LUBE AO-210** and an aminic antioxidant provides the best oxidation stability results. **NA-LUBE AO-210** is also specified as the oxidation inhibitor in numerous fuel applications including motor gasoline, aviation gasoline, diesel fuel and jet fuel.

**ADVANTAGES:**

- \* Readily soluble in mineral oils and fuels
- \* Low melting point, liquefies with minimal heat
- \* Particularly effective in combination with aminic antioxidants
- \* Very low volatility compared to BHT

(see reverse side)

## NA-LUBE<sup>®</sup> AO-210

**TEST RESULTS:** Technical reports are available from King Industries and can be requested by contacting the offices shown below.

**SOLUBILITY:** Soluble in petroleum and synthetic lubricant base stocks and most common solvents. Insoluble in water. However, it is recommended to verify the solubility in the base oils used and the compatibility with other additives.

### STANDARD

**PACKAGING:** 410 lbs (186 kg) closed head drum.

### STORAGE

**CONDITIONS:** Store in a cool, dry place away from any direct source of heat and moisture. Maximum recommended storage temperature: 46°C (115°F)

**SHELF LIFE:** Best if used within 2 years from the date of manufacture.

**HANDLING:** Avoid all personal contact. Observe good personal hygiene. For additional information, it is advised to consult the Material Safety Data Sheet (MSDS) for **NA-LUBE AO-210**.

**REGISTRATION:** Please refer to Section 15 of the Material Safety Data Sheet for information.

For Samples or Technical Service, contact King Industries or your King representative.

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