



# Cola<sup>®</sup>Fax 3384

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## DESCRIPTION

**Cola<sup>®</sup>Fax 3384** is a 100% active, branched alcohol phosphate ester in the acid form containing approximately 13% phosphorus.

## APPLICATIONS

**Cola<sup>®</sup>Fax 3384** is recommended for use in metal working lubricants and synthetic cutting fluids. In addition to providing low coefficient of friction, rust inhibition and reduced surface tension, its high phosphorus content provides good pressure lubricity, anti-wear and anti-weld properties. Its low foaming properties and potent wetting capabilities also suggest uses in spray applications for hard surface cleaners and as a hydrotrope in built alkaline systems. **Cola<sup>®</sup>Fax 3384** can be used in both water and oil-based formulations

## TYPICAL PROPERTIES

Appearance	Clear amber liquid
Color (GVCS - 1933)	6 max.
pH (10% solution IPA/H <sub>2</sub> O)	2.0
Weight per Gallon	8.6 lbs.
Average Molecular Wt.	297
Acid Value 1: (Titrate in 1:1 iso-propanol/water using Bromophenol Blue)	220
Acid Value 2: (Titrate in 1:1 iso-propanol/water using Phenolphthalein)	335
% Phosphorus	Approximately 13%
Solubilities:	
Water:	Insoluble at low pH's, but clearly soluble at neutral and alkaline pH's.
Solvents:	Soluble at 1.0% and 10.0% in Ethanol, Chlorinated Hydrocarbons, Aromatic Hydrocarbons, Mineral Spirits, Kerosene and Mineral Oil.

## TYPICAL FORMULATIONS

### Formula I - Laboratory Screening Formulation

	<u>Wt. %</u>
Cola <sup>®</sup> Fax 3384	2.5
Triethanolamine	2.5
Water	<u>95.0</u>
<b>TOTAL</b>	<b>100.0</b>
pH (as is):	7.4
Falex Load Test: (as is)	Passed 4000 lbs.
1:20 Dilution	Passed 3000 lbs.

### Formula II - Synthetic Cutting Fluid

	<u>Wt. %</u>
Cola <sup>®</sup> Mine CDA	8.75
Cola <sup>®</sup> Fax 3384	1.75
Triethanolamine	1.75
Hexylene Glycol	3.00
Cola <sup>®</sup> Teric SFC	3.50
Water	<u>81.25</u>
<b>TOTAL</b>	<b>100.0</b>
pH (as is)	9.1
pH 1:20	8.6
pH 1:50	8.5

Falex Load Test:  
Falex Wear Test:  
(1:20 Dilution) to next 250 lbs.

Waring Blendor Foam Test

<u>1:20 Dilution</u>	<u>Net Foam Height</u>
Initial	1.0 cm
30 Seconds	0.5 cm
1 Minute	0.3 cm
5 Minutes	0.1 cm

Conditions: 200 ml of a 1:20 dilution agitated in Waring Blendor for one minute

Cola<sup>®</sup>Mine CDA, a long chain alkanolamide, contributes both corrosion inhibition and foam reduction, and in combination with the TEA salt of Cola<sup>®</sup>Fax 3384, offers excellent lubricating properties.

Formula II was evaluated for corrosion inhibition properties versus the same formula containing 2% sodium nitrate in place of Cola<sup>®</sup>Teric SFC. At 1:20 and 1:50 there was no attack with Formula II.

Both Cola<sup>®</sup>Teric SFC and hexylene glycol contribute to the stability of the formulation. The foaming properties of Formula II are minimal.

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**WARRANTY**

Colonial Chemical guarantees that its products meet published specifications. No other warranties or guarantees are expressed or implied because the use of this material is beyond the control of Colonial Chemical.

**Colonial Chemical, Inc.**

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