

COMPONENTS

HiTEC[®] 4313

Ashless Copper Corrosion Inhibitor and EP Agent



For Use in a Variety of Fuel Oils and Greases

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Application

HiTEC® 4313 is an ashless alkyl thiadiazole corrosion inhibitor for use in various fuel oils and greases. Please refer to the thiadiazole technical bulletin for specific application information.

Key Performance Benefits

- Protects copper containing alloys from degradation due to sulfur
- Excellent metal passivator and corrosion inhibitor properties
- Strong antioxidant performance
- Provides extreme pressure properties
- Provides copper passivator properties in selective fuels
- Booster for FZG, TIMKEN, ASTM D130, ASTM D4048 and many other EP corrosion tests

Recommended Dosage

HiTEC® 4313 is generally used in dosages starting at 0.01% wt. for industrial oils ranging from 0.045% wt. to 0.15% wt. in automotive gear oils depending on the type of basestock. To obtain extreme pressure properties, treat levels generally above 0.15% wt. are recommended. Fuel treatment levels are in the ppm range depending upon the active sulfur level. Please contact your Afton Chemical representative for specific details about applications and related treat levels.

Typical Characteristics

Appearance	Yellow to amber clear viscous liquid
Density, lbs/gal.	9.32
Specific Gravity @ 15.6/15.6°C	1.12
Viscosity @ 100°C, cSt	13.6
Flash Point, °C (PMCC)	130 min.
Sulfur, % wt.	35
Nitrogen, % wt.	6.4
TAN, mgKOH/g	30
Color, ASTM D-1500	2

Handling Information

Max Handling Temp: 65°C
Shelf Life: 30 months @ 0-25°C
2-3 months @ 50°C

Performance

With special interest in grease applications, Afton has tested HiTEC® 4313 in a fully formulated lithium grease.

Typical Treat Rate wt.%

	0.0	0.15	0.25
Copper Corrosion (D4048) - 24 hrs. @ 100°C	3b	2c	1b