

**MEMORANDUM**

10.09.09

To: Ethanol Industry Member  
 From: Kristy Moore  
 Re: Corrosion Inhibitor in FUEL ETHANOL, Industry Guidelines, Specifications, and Procedures

The RFA publishes an industry guideline to promote the production and distribution of the highest quality ethanol to consumers. As a segment of that responsibility, the RFA includes a recommendation that member companies add a corrosion inhibitor to all their fuel grade ethanol at a treat rate sufficient to provide corrosion protection comparable to that of other available motor fuels. Corrosion inhibitors that have been shown to be effective for ethanol and gasoline/ ethanol blends are then listed in the most current version of the FUEL ETHANOL, Industry Guidelines, Specifications, and Procedures, RFA publication # 960501.

Current list of Corrosion Inhibitors recommended for Fuel Grade Ethanol:

	<b>Additive</b>	<b>Treat Rate*</b>
	Innospec Octel DCI -11	10 PTBE
	Petrolite Tolad 3222	20 PTBE
	Petrolite Tolad 3224	13 PTBE
	Nalco 5403	30 PTBE
	ENDCOR FE-9730 (formerly Betz ACN 13)	20 PTBE
	GE EndCor FE 9730	20 PTBE
	GE EndCor GCC 9711	20 PTBE
	GE EndCor FE 9733	20 PTBE
	JACAM OCI 1016	10 PTBE
	MidContinental MCC5011E	20 PTBE
	MidContinental MCC5011EW	27 PTBE
	MidContinental MCC5011pHe	10 PTBE
	CorrPro 654	13 PTBE
	Nalco EC5624A, EC5624ATR	15 PTBE
	Afton Chemical Bio Tec 9880	10 PTBE
	Afton Chemical Bio Tec 9881	6 PTBE
	SBZ 2005 Corrosion Inhibitor	10 PTBE
	Lubrizol LZ 541	16 PTBE
	US Water CorrPro 656	13 PTBE

*\*PTBE- pounds per thousand barrels of denatured ethanol.*

The RFA does not endorse any additive or recommend one over another. Other corrosion protection additives of comparable performance are also acceptable for use. The criteria used for inclusion of the additives in the table are to add ethanol to an E rated gasoline (NACE Standard Test Method TM-01-72). The additive must then raise the NACE rating of the blend to B+ or better for the recommended additive treat rate. Other additives meeting these performance criteria are also acceptable. The RFA Technical Committee, in full or part, will review the manufacturers supporting information for effectiveness. If the information is found to support the effectiveness claim, then the corrosion inhibitor will be included in the next revision of the RFA publication #960501. A letter of support from the RFA may be used in between publications.

If you should have any questions or would like to comment on this issue, please don't hesitate to contact me directly at 309-830-6154.