## BlendTech Blending Procedure

Date: November 19, 2010

Document Description: Blending Procedure for BTUCA (any dye color) EG 50/50

Premix

**Formulation:** @60°F

	Relative Density	% by Volume	10,000 Gallon Blend		
mg/L					
1. Ethylene Glycol	1.1155	49.45	4890		
2. Demineralized Water	1.0000	49.45	5000		
3. BTUCA	1.2950	1.10	110		
Coolant Total:	1.0719	100.00	9900*		

## Blend Procedure:

- 1. Temperature of Water, EG and Inhibitor should be at least 60° F. Assure that the Inhibitor has been mixed until homogenous. Fluids should be combined gradually while the batch is being agitated. If EG is measured by volume, take into account the changes of density at different temperatures. Maintain good mixing.
- 2. Slowly add in proper amount of demineralized water. Mix thoroughly.
- 3. Adjust pH to 9.0 with sodium hydroxide or potassium hydroxide.
- 4. Slowly add the specified amount of BTUCA blending syrup into the tank. Note: Drummed BTUCA must be stored @  $60^{\circ}F$  or above. Should BTUCA crystallize in the drum due to low temperature storage, heat the drum to  $80^{\circ}FC$   $90^{\circ}F$ , and mix thoroughly until crystals completely redissolve.
- 5. Mix further for at least one hour. Check for proper pH (10 to 10.75). Adjust as required.

\*Total gallons do not add to 10,000 because volume shrinks when different liquids are mixed together.

## Quality Control Limits

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Product: BTUCA EG 50/50 Premix

Tests:	ASTM	Spec Limit
Specific Gravity, 60°F	D-1122	1.060 - 1.080
рН	D-1287	10.0 - 10.8
Freeze Point	D-3321	$-34F^{\circ}C$ max.
Nitrite	D-5827	700 ppm