BlendTech Blending Procedure

Date: May 3, 2017

Document Description: *Blending Procedure for Blend Tech "BTFFCA" (any color) 50% Mono Ethylene Glycol Premix (ASTM D3306 Type III)*

Formulation: *@20°C*

	Relative Density mg/L	% by Weight	% by Volume
1. Ethylene Glycol	1.1155	51.47	50.00
2. Demineralized Water	1.0000	47.17	48.90
3. BTFFCA	1.3100	1.36	1.11
Coolant Total:	1.0716	100.00	100.00

Blend Procedure:

1. It is preferred to blend by weight. Determine temperature of the fluids in storage tanks. Blending below 20°C is not recommended. Maintain active mixing during the entire blending process. If blending by weight go to step 2. If fluids are measured by volume, adjust volumes of fluids for densities at measured temperatures.

2. Adjust pH of the EG to 9.0 +/- 0.2 using sodium hydroxide (NaOH) or potassium hydroxide (KOH).

3. Slowly add demineralized water to the ethylene glycol. Mix thoroughly for 20 minutes.

4. Slowly pump in proper amount of BTFFCA liquid additive into the tank. Note: Drummed BTFFCA must be stored @ 16°C or above. Should some components of the BTFFCA crystallize in the drum due to low temperature storage, heat the drum to 27°C - 33°C, and mix thoroughly until crystals completely dissolved. The quality of the BTFFCA is **not** affected as long as all of the crystals are dissolved and the solution is homogenous.

5. Continue to mix for one hour. Check for proper pH (10.0 to 11.0). Adjust as required using sodium hydroxide (NaOH) to increase pH or nitric acid (HNO_3) to reduce pH.

Typical Certification of Analysis

Date: *6/1/10*

Product: *BTFFCA EG 50/50 Premix*

Tests:	ASTM	Spec Limit
Specific Gravity, 60°F	D-1122	1.060 – 1.080
pH	D-1287	10.0 – 11.0
Freeze Point	D-3321	-37°C max.
Foam (ml/sec)	D-1881	150/5
Nitrites (as NO_2)	D-5827	1,200 ppm (min)