ComStar

Frost Free

Super Concentrate
Anti-Freeze and Heat Transfer Fluid

Bio-Safe Series

- Biodegradable
- 100% Ethylene Glycol Formula

Industrial coolant and heat transfer fluid. Recommended for applications and operating systems where it would not come in contact with food, beverages or potable water. **KEEP OUT OF REACH OF CHILDREN**

Frost Free, 100% Ethylene Glycol formula is biodegradable and excellent for HVAC systems of all kinds: thermal storage, water chiller system, computer room cooling, solar system, combined heating and cooling loops and radiant heating systems.

Readying the system: DIRECTIONS: IMPORTANT- Remove any dirt, oil or metal filings that may contaminate the cooling system's piping. Flush the system thoroughly using a mild cleaning solution or high-quality water. Completely drain before charging with Frost Free. Note: Cleaning new systems is just as important as cleaning old ones. New systems can be coated with oil or a protective film. Dirt and scale are also common. In many cases, for both old and new systems, special cleaners are needed to remove scale. For more information on cleaners, contact ComStar at 1-800-328-0142.

No Inhibitor / Color	With Corrosion Inhibitor	With Inhibitor & Color
STOCK NO. 35-707 5 U.S. GALLONS (19 LITERS)	STOCK NO. 35-717 5 U.S. GALLONS (19 LITERS)	STOCK NO. 35-719 5 U.S. GALLONS (19 LITERS)
STOCK NO. 35-708 55 U.S. GALLONS (209 LITERS)	STOCK NO. 35-718 55 U.S. GALLONS (209 LITERS)	STOCK NO. 35-710 55 U.S. GALLONS (209 LITERS)

DETERMINE TOTAL SYSTEM CAPACITY

Measure length and diameter of all pipe in the system and then estimate the system's total fluid using the chart below.

TYPE "L" COPPER TUBING STANDARD STEEL PIPE

Tubing size (inches)	Gallons per 100 ft. of tubing	Tubing size (inches)	Gallons per 100 ft. of tubing
3/8	0.75	3/8	1.00
1/2	1.21	1/2	1.60
5/8	1.81	3/4	2.80
3/4	2.51	1	4.50
1	4.28	1-1/4	6.30
1-1/4	6.52	1-1/2	10.20
1-1/2	9.25	2	17.00
2	16.06	2-1/2	27.50

PERCENTAGE VOLUME OF FROST FREE REQUIRED FOR PROTECTION

Desired Chiller Temperature - Fahrenheit -	Percent EG Concentration Required By Volume	
	For Freeze Protection	For Burst Protection
	Chiller Fluid (EG) (Ethylene)	Chiller Fluid (EG) (Ethylene)
20 °	16%	11%
10	25	17
0	33	22
-10	39	26
-20	44	30
-30	48	30
-40	52	30
-50	56	30
-60	60	30

Notes: 1) These figures are examples only and may not be appropriate to your situation. Generally, for an extended margin of protection, you should select a temperature in this table that is at least 5°F lower than the expected lowest ambient temperature. Inhibitor levels should be adjusted for solutions of less than 30% glycol. Contact ComStar International Inc. for information on specific cases or further assistance.
2) Galvanized steel is not recommended because zinc will react to inhibitors used in glycol-based chiller fluids, causing precipitation of components, possible fouling and decrease of heat transfer efficiency.

FIRST AID: **EYES:** Flush with water for 15 minutes.
SKIN: Wash with soap and water.
INHALATION: Remove to fresh air.
INGESTION: Drink plenty of water, call physician.
Contents: Ethylene Glycol (CAS# 107211), Dipotassium Phosphate (CAS# 7758-11-4)

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