

# FREEZE-FIGHTER RTU-PG35

## -60°F (-51°C) BURST PROTECTION

### FRTU-SPEC

#### PRODUCT DESCRIPTION

##### PRODUCT

**FREEZE-FIGHTER RTU-PG35** Ready-to-Use Anti-Freeze Solution and Heat Transfer Fluid for HVAC, Radiant, Potable Water, and Solar Systems.

##### DESCRIPTION

A Ready-to-Use (RTU) nontoxic Propylene Glycol Anti-Freeze Solution with special anti-corrosion inhibitors, color indicators, and burst protection to -60°F (-51°C) and up to 0°F (-18°C) freeze protection.

##### RECOMMENDED USES

**FREEZE-FIGHTER RTU-PG35** is ideal for water-based systems requiring maximum freeze and corrosion protection without the risk of environmental contamination.

Works excellent in:

- Closed Loop Solar Systems
- Hydronic HVAC Systems
- Potable Water Lines
- Sprinkler Systems
- Irrigation Lines
- Recreational Vehicles
- Pleasure Craft

**FREEZE-FIGHTER RTU-PG35** is a pre-blend to allow for direct replacement of water in the system with equal amounts of **FREEZE-FIGHTER RTU-PG35** for burst protection down to -60°F (-51°C). The direct replacement of water with anti-freeze, without having to measure or calculate the amount of anti-freeze needed, provides for an error free method to protect the system. **FREEZE-FIGHTER RTU-PG35** can also be diluted to offer higher freeze points and burst protection in warmer climates (see freeze and burst protection chart).

Lubricates pumps, valves and moving parts. Will not harm plastic or rubber seals, o-rings, or gaskets.

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#### RECOMMENDED USES (Continued)

**FREEZE-FIGHTER RTU-PG35** is suitable for use with continuous operating systems with temperatures up to 250°F (121°C) and will not degrade significantly from short term exposures to temperatures up to 350°F (177°C).

#### COLOR/CONSISTENCY

Blue liquid

#### ENVIRONMENTAL STATEMENT

**FREEZE-FIGHTER RTU-PG35** is nontoxic, nonflammable, and non-corrosive. Eliminates the possibility of contaminating domestic and potable water systems. Will not support bacterial growth. Meets and exceeds the corrosion protection requirements of ASTM D1384

#### APPLICATION PRECAUTIONS

**FREEZE-FIGHTER RTU-PG35** has a greater tendency to leak past faulty joints than water, so all leaks must be properly corrected.

#### LIMITATIONS

Not recommended for systems containing galvanized pipe or aluminum. Do not use in conjunction with boiler treatment chemicals without first consulting the manufacturer.

#### WEIGHT PER U.S. GALLON

8.34 lbs. (3.76 kg) ± 0.2

#### PACKAGING

##### U.S. Measure:

<u>Stock Code</u>	<u>Size</u>
<b>5 Gallon Plastic Pail w/ Handle</b>	
FRTU5	5 gal. (18.9 L)
<b>55 Gallon Drum</b>	
FRTU55	55 gal. (208 L)
<b>275 Gallon Tote</b>	
FRTU275	275 gal. (1040 L)

#### SHIPPING WEIGHT PER CASE

<u>Stock Code</u>	<u>Case Weight</u>	<u>#/Case</u>
FRTU5	44 lbs. (20.0 kg)	1
FRTU55	500 lbs. (226.8 kg)	1
FRTU275	2500 lbs. (1134 kg)	1

#### DIRECTIONS FOR USE

1. Empty the entire system through faucets, petcocks, and other openings. Then close all openings.
2. Replace all water in the system with an equal amount of **FREEZE-FIGHTER RTU-PG35** to obtain -60°F (-51°C) burst protection.
3. Be sure to protect all drains by adding **FREEZE-FIGHTER RTU-PG35** to traps and toilets to prevent freezing. Open each faucet to be sure **FREEZE-FIGHTER RTU-PG35** has displaced any water pockets. Close faucets when the blue color of the Anti-Freeze Solution appears.
4. For circulating hot water heating systems and solar heating and cooling systems, **FREEZE-FIGHTER RTU-PG35** can remain in the system all year. Be sure to flush the system thoroughly of dirt, scale or oil prior to adding **FREEZE-FIGHTER RTU-PG35**.
5. Test the entire system for freeze protection with a refractometer and acid corrosion protection with pH test strips. Additional **FREEZE-FIGHTER RTU-PG35** may be required. Test the system annually.

(over)



The Industry Standard for Over 100 Years

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#### TECHNICAL CHARACTERISTICS

FREEZE-FIGHTER RTU-PG35 FREEZE AND BURST PROTECTION CHART					
Percent in Solution					
	100%	80%	75%	60%	50%
<b>Burst Protection °F</b>	-60.0	DO NOT DILUTE – READY-TO-USE			
<b>Burst Protection °C</b>	-51.0				
<b>Freeze Point °F</b>	-0.0	DO NOT DILUTE – READY-TO-USE			
<b>Freeze Point °C</b>	-17.8				
<b>Parts by Volume - Water</b>	0	1	1	2	1
<b>Parts by Volume - Freeze-Fighter Solution</b>	1	4	3	3	1

#### HOW TO SIZE YOUR SYSTEM

The capacity of your boiler can be found on the boiler plate, in the boiler manual or contact the manufacturer. To determine the Total Capacity of the System, use one of the following methods:

**Direct Method:** Fill system completely, making sure all components of system are full. Shut system down, let pressure drop to a safe level. Drain out fluid into suitable container and record the number of gallons removed. This is Total System Fluid Capacity.

**Estimated Method:** Determine system pipe sizes and amount of linear footage for each size. Use the following chart to help determine the number of gallons of solution required to fill the system. Add this number to the gallon capacity of the boiler or equipment in the system to determine the Total System Fluid Capacity.

VOLUME/PIPE SIZING									
PIPE DIAMETER	½"	¾"	1"	1½"	2"	2 ½"	3"	3 ½"	4"
<b>Number of Gallons Per 100' Standard Steel Pipe</b>	1.6	2.8	4.5	10.5	17.5	25.0	39.0	53.0	66.7
<b>Number of Gallons Per 100' Type "L" Copper Tubing</b>	1.2	2.5	4.3	9.3	16.1	24.8	35.4	47.8	62.0

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