freezemaster™ Antifreeze UL-Listed Solution for Fire Sprinkler Systems

Product Summary

freezemaster™ antifreeze is a premixed freeze protection solution designed and UL-listed for use in wet sprinkler systems in residential and commercial applications. freezemaster™ antifreeze has an expanded listing based on additional testing at UL. freezemaster™ antifreeze is designed for use in freezing temperatures that can cause damage to equipment or prevent proper function of the sprinkler system. freezemaster™ antifreeze was developed to meet the requirements of UL 2901 for compliance with the current editions of NFPA 13, 13R, 13D and 25.

freezemaster™ antifreeze remains in a liquid state at temperatures as low as -12°F (-24.4°C). Once the sprinkler system activates, freezemaster™ antifreeze immediately discharges from the sprinklers and is followed by water. This technology provides a much more cost effective solution than dry pipe or heat trace systems. Moreover, there is not the delay that occurs between activation of the sprinkler and water reaching the sprinkler head in dry pipe systems. Lastly, freezemaster™ antifreeze provides superior corrosion resistance relative to other antifreeze products.

Allowable Temperature Range

Minimum use temperature: -12°F (-24.4°C)

Maximum use temperature: 150°F (65.6°C)

Note: freezemaster™ antifreeze solution should only be used in areas subject to freezing unless otherwise permitted by the authority having jurisdiction (AHJ).

Fire Performance

All fire protection systems using freezemaster™ antifreeze shall conform to local, state and NFPA requirements.

Safe Handling Procedures

freezemaster™ antifreeze has been formulated to reduce risks to humans and the environment. Gloves and eye protection are recommended when handling freezemaster™ antifreeze. For additional product information and a Safety Data Sheet, refer to freezemaster.com.

Typical Properties

Appearance

Blue liquid

Note: freezemaster™ antifreeze may slightly discolor due to exposure to higher temperatures and sunlight; however, this will not affect the performance of the solution.

Freeze Point

-15°F (-26.1°C)

Note: Freeze point is the temperature at which the first ice crystal forms in the fluid.

Pour Point

-22.4°F (-30.2°C)

Note: Pour point is the lowest temperature at which movement of the specimen is observed.

Burst Point

-58°F (-50°C)

Note: Burst point is the temperature at which frozen solution expands and may burst the vessel.

Density

See Table C, measured at atmospheric pressure of 760 mm

pH

7 – 8

Conductivity

4500 – 5500 µS/cm

Refractive Index

See Table A

Specific Gravity

See Table A, measured at 77°F (25°C)

Viscosity

See Table B, measured at atmospheric pressure of 760 mm

Technical Data

Approvals

UL- and cUL-Certified
UL- and cUL-Listed
FBC™ System Compatible

FBC™ System Compatible indicates that this product has been tested, and is monitored on an ongoing basis, to assure its chemical compatibility with FlowGuard Gold®, BlazeMaster® and Corzan® piping systems and products made with TempRite® Technology. The FBC System Compatible Logo, FBC™, FlowGuard Gold®, BlazeMaster®, Corzan®, and TempRite® are trademarks of Lubrizol Advanced Materials, Inc. or its affiliates.

Compatibility

The following materials have been tested per UL 2901 and are compatible with freezemaster™ antifreeze:

- Steel piping
- Galvanized steel piping
- Brass materials
- Stainless steel piping
- Black steel
- Copper
- Bronze
- Cast iron
- Fusion bonded epoxy coated ductile iron
- CPVC
- PEX
- EPDM
- Butyl rubber
- Natural rubber
- Nitrile rubber (NBR)
- Styrene-butadiene rubber (SBR)

NOTE

For use with other materials, contact your Piping System Consultant.

Table A:
Acceptable Property Ranges of freezemaster™ Antifreeze for Minimum Use Temperature -12°F (-24.4°C)

Concentration of freezemaster™ Antifreeze %	Specific Gravity at 77°F (25°C)	Refractive Index at 77°F (25°C)
100	1.086 – 1.092	1.388 – 1.392

Table B:
freezemaster™ Antifreeze Viscosity Across Temperature Ranges

Temperature °F (°C)	Viscosity, Centipoise
-12 (-24.4)	104
-10 (-23.3)	91
-5 (-20.6)	72
0 (-17.7)	55
5 (-15)	43
10 (-12.2)	36
15 (-9.4)	30
20 (-6.7)	25
25 (-3.9)	21
30 (-1.1)	19
35 (1.7)	16
40 (4.4)	13
45 (7.2)	11
50 (10)	9
55 (12.8)	8
60 (15.6)	7
68 (20)	6
150 (65.6)	2

Table C:
freezemaster™ Antifreeze Density

Temperature °F (°C)	Density		
	lb/gal	kg/m^3	lb/ft^3*
-12 (-24.4)	9.3	1115.3	69.6
-10 (-23.3)	9.3	1114.6	69.6
-5 (-20.6)	9.3	1112.9	69.5
0 (-17.7)	9.3	1111.2	69.4
5 (-15)	9.3	1109.5	69.3
10 (-12.2)	9.2	1107.8	69.2
15 (-9.4)	9.2	1106.2	69.1
20 (-6.7)	9.2	1104.5	69
25 (-3.9)	9.2	1102.8	68.8
30 (-1.1)	9.2	1101.1	68.7
35 (1.7)	9.2	1099.4	68.6
40 (4.4)	9.2	1097.7	68.5
45 (7.2)	9.1	1096	68.4
50 (10)	9.1	1094.4	68.3
55 (12.8)	9.1	1092.7	68.2
60 (15.6)	9.1	1091	68.1
68 (20)	9.1	1088.3	67.9
104 (40)	9	1076.2	67.2
150 (65.6)	8.9	1060.6	66.2

NOTES

*This column is used in the K-factor equation provided in the Hydraulic Calculations section.

Table D:
freezemaster™ Antifreeze Expansion

Tubing Size	Approximate Gallons of Fluid/100 ft			
	Steel Schedule 40 Pipe	PEX Tube	CPVC Pipe	Copper Pipe Type L
1/2 in.	—	1	—	1.5
3/4 in.	—	2	3.5	2.5
1 in.	4.5	3	5	4.5
1 1/4 in.	8	4.5	8	6.5
1 1/2 in.	11	6.5	10.5	9.5
2 in.	17.5	11	16.5	16.0
2 1/2 in.	25	—	24.0	25
3 in.	38.5	—	35.5	—
4 in.	66.5	—	—	—

NOTES

- Interpolation and extrapolation can be calculated for values outside temperatures and volumes listed in Table E.
- For examples on calculating fluid expansion and contraction, see the sections titled Expansion Example and Contraction Example, respectively.
- Values are approximate.

Table E:

freezemaster™ Antifreeze Approximate Fluid Expansion/Contraction in Gallons (and Litres)

Initial Fluid Volume		Temperature Change															
		20°F (11.1°C)		40°F (22.2°C)		60°F (33.3°C)		80°F (44.4°C)		100°F (55.6°C)		120°F (66.7°C)		140°F (77.8°C)		160°F (88.9°C)	
		Approximate Fluid Expansion/Contraction in Gallons (and Litres)															
gal	(L)	gal	(L)	gal	(L)	gal	(L)	gal	(L)	gal	(L)	gal	(L)	gal	(L)	gal	(L)
25	(95)	0.2	(0.6)	0.3	(1.3)	0.5	(1.9)	0.7	(2.5)	0.8	(3.2)	1.0	(3.8)	1.2	(4.4)	1.3	(5.1)
50	(189)	0.3	(1.3)	0.7	(2.5)	1.0	(3.8)	1.3	(5.0)	1.7	(6.3)	2.0	(7.6)	2.3	(8.8)	2.7	(10.1)
75	(284)	0.5	(1.9)	1.0	(3.8)	1.5	(5.7)	2.0	(7.6)	2.5	(9.5)	3.0	(11.3)	3.5	(13.2)	4.0	(15.1)
100	(379)	0.7	(2.5)	1.3	(5.0)	2.0	(7.6)	2.7	(10.1)	3.3	(12.6)	4.0	(15.1)	4.7	(17.7)	5.3	(20.2)
150	(568)	1.0	(3.8)	2.0	(7.6)	3.0	(11.3)	4.0	(15.1)	5.0	(18.9)	6.0	(22.7)	7.0	(26.5)	8.0	(30.3)
200	(757)	1.3	(5.0)	2.7	(10.1)	4.0	(15.1)	5.3	(20.2)	6.7	(25.2)	8.0	(30.2)	9.3	(35.3)	10.7	(40.3)
250	(946)	1.7	(6.3)	3.3	(12.6)	5.0	(18.9)	6.7	(25.2)	8.3	(31.5)	10.0	(37.8)	11.7	(44.1)	13.3	(50.4)
300	(1136)	2.0	(7.6)	4.0	(15.1)	6.0	(22.7)	8.0	(30.3)	10.0	(37.8)	12.0	(45.4)	14.0	(53.0)	16.0	(60.5)

Design Requirements

Flow rates, pipe sizing, sprinkler spacing, hanging methods and system design must be in accordance with NFPA 13, 13R and 13D.
freezemaster™ antifreeze is not listed for use in protecting extra hazard occupancies or flammable liquids, or use with ESFR sprinklers.

System Limitations

Fire sprinkler systems utilizing freezemaster™ antifreeze shall meet the system size limitations as follows:

Designation	Use Temp Range	Application	Max Volume of Antifreeze in Sprinkler System
Antifreeze	-12°F to 150°F (-24°C to 66°C)	NFPA 13D [1]	≤500 gal; in accordance with NFPA 13D design criteria
		NFPA 13R – Residential Only (including corridors, garages that serve only a single dwelling unit, and compartmented Ordinary Hazard areas ≤500 sq ft) [1] Where NFPA 13R requires the use of NFPA 13 design criteria, refer to the NFPA 13 applications and volume limitations.	≤500 gal; in accordance with NFPA 13R design criteria Where NFPA 13 design criteria is required in areas of an NFPA 13R Occupancy, such as an attic, common and large garages, or a clubhouse; use the applicable volume limitation for the hazard area for NFPA 13.
		NFPA 13 - Light Hazard [1]	≤200 gal; in accordance with NFPA 13 design criteria or >200 gal to ≤500 gal; in accordance with NFPA 13 using the dry system hydraulic design criteria, where the system hydraulics are designed as a dry system even though the system is filled with antifreeze.
		NFPA 13 – Ordinary Hazard Groups 1 & 2 [1]	≤40 gal; in accordance with NFPA 13 design criteria or >40 gal to ≤375 gal; in accordance with NFPA 13 using the dry system hydraulic design criteria, where the system hydraulics are designed as a dry system even though the system is filled with antifreeze.
		NFPA 13 – Storage [1]	≤40 gal; in accordance with NFPA 13 design criteria

[1] The antifreeze solution is intended to be installed in accordance with the manufacturer's instructions. For all systems, the following requirements shall apply: (a) the use of the antifreeze solution is limited to the aboveground system piping only except for a limited length of underground piping that connects sections of the aboveground system, (b) the viscosity of the antifreeze solution at the lowest anticipated temperature of the system shall be considered in the hydraulic design, (c) the friction loss shall be determined using the Hazen-Williams formula for water and the Darcy-Weisbach formula to account for the antifreeze solution fluid properties, and (d) the K-factor of the sprinkler shall be adjusted to account for the density of the antifreeze.

Hydraulic Calculations

For all systems, the following requirements shall apply:

- The use of the antifreeze solution is limited to the aboveground system piping only except for a limited length of underground piping that connects sections of the aboveground system.
- The viscosity of the antifreeze solution at the lowest anticipated temperature of the system shall be considered in the hydraulic design.
- The friction loss shall be determined using the Hazen-Williams formula for water and the Darcy-Weisbach formula to account for the antifreeze solution fluid properties.
- The K-factor of the sprinkler shall be adjusted to account for the density of the antifreeze.

The flowing pressures are to be based upon a K-factor calculated using the following equation:

$$K_A = 7.94 K_W \sqrt{\frac{1}{\gamma_A}}$$

K_A = sprinkler K-factor discharging the antifreeze solution

K_W = sprinkler K-factor discharging water

γ_A = density of the antifreeze solution at the temperature used for testing in lb/ft^3

Note: See Table C for density in lb/ft^3

Where the use of antifreeze in accordance with the listing requires the hydraulic design to be based on the dry system hydraulic design criteria, the hydraulic calculations are to be performed in accordance with the applicable NFPA Standard dry system design even though the system is filled with antifreeze. The following points are examples of dry system design criteria:

1. All applicable design area increases shall apply, such as:
   a. The 30 percent increase for dry systems.
   b. The 30 percent increase for sloped ceiling applications, where applicable.
2. Where using QR sprinklers, the QR reduction in design area shall not apply.
3. Where a system is being designed using specific application attic or concealed space sprinklers, the dry system hydraulic design criteria in the manufacturers installation instructions shall be used.

The friction loss coefficient (c-factor or c values) for a wet system is permitted to be used for the dry system hydraulic calculation using antifreeze. It is not required to use the c-factor for the dry system.

Minimum Design Pressure

The minimum design pressure of the sprinkler system must be the minimum required pressure for the sprinklers used.

Fluid Sampling Valve Connection

The riser must be installed in an area not subject to freezing with a minimum temperature of 40°F (4°C). A fluid sampling valve connection must be located at the top of each system riser. The sampling valves should be located for ease of access to the valve by contractors.

The sampling connection will facilitate implementing the service requirements outlined in the Care and Maintenance section.

Fluid Contraction and Expansion

Fluids expand and contract when exposed to changes in temperatures, resulting in changes in fluid density. Thermal expansion shall be taken into account when designing or retrofitting a sprinkler system that will use freezemaster™ antifreeze by use of an expansion tank. Table E shows the thermal expansion or contraction of the solution at different temperatures in sprinkler system volumes, using the equation for sizing the expansion chamber due to thermal expansion outlined in NFPA 13.

These values and the NFPA 13, 13R and 13D Standards for the Installation of Sprinkler Systems can be used by the installer to determine the proper expansion or contraction arrangement of a sprinkler system containing freezemaster™ antifreeze.

Expansion Example

In the winter, a sprinkler system is filled with 150 gal (568 L) of freezemaster™ antifreeze at an ambient temperature of -12°F (-24.4°C), but the system reaches a temperature of 88°F (31.1°C) in the summer months. The temperature change is 100°F (55.5°C), and the fluid will expand in the summer approximately 5 gal or (19 L).

Contraction Example

In October, a sprinkler system is filled with 50 gal (189 L) of freezemaster™ antifreeze at a room temperature of 68°F (20°C). In February, the system reaches a temperature of 32°F (0°C). The temperature change is 36°F (20°C), and the fluid will contract roughly 0.7 gal (2.5 L). When the system heats back up in the summer months, it will expand back to its original volume.

Expansion Tank

It is highly recommended for all systems, including existing, that an expansion tank be used. Without an expansion tank there is potential for system damage and the possibility for water to enter the system and alter the performance of freezemaster™ antifreeze. Reference NFPA 13 for guidance on the addition of expansion tanks in new and existing systems. Vessel sizing should be based on anticipated operating conditions and associated expansion values in Table D. Note: Reference NFPA 13, System Requirements for Antifreeze Systems for alternate methods.

Installation

freezemaster™ antifreeze is premixed at the factory; do not dilute with water. Diluting with water or any other ingredients at any time can adversely affect the properties and performance of freezemaster™ antifreeze. Carrying freezemaster™ antifreeze to the site in a container other than the original can introduce contaminants and reduce the solution's functional life. Functional life can also be affected by the environmental conditions of the end use. Only use freezemaster™ antifreeze in closed systems to avoid the corrosive effects of oxygen exposure.

New Systems

Use the following guidelines when preparing a new sprinkler system for freezemaster™ antifreeze installation:

1. The system shall be installed with materials as indicated in the compatibility list.
2. Verify the required backflow prevention and cross connection control is in accordance with state and local requirements.
3. The system shall be outfitted with air vent valve(s) and fluid sampling valve connections as required by the applicable NFPA standard.
4. The system should be determined to be airtight prior to introducing freezemaster™ antifreeze into the system to prevent loss or spillage of product.
5. A pressure test shall be conducted in accordance with the applicable NFPA standard. This pressure test may be performed with water or freezemaster™ antifreeze. It is recommended that systems with drops be tested with freezemaster™ antifreeze to prevent the accumulation of water in the drops.
6. For systems hydrostatically tested with water, the system must be drained after the test in accordance with the applicable NFPA standard.

7. It is recommended that prior to filling the system with freezemaster™ antifreeze, the antifreeze is tested to verify that the specific gravity or refractive index is within the ranges specified in Table A. If the antifreeze solution is from a new, unopened factory container, this test verification is not required. If the solution is discolored or the container has dirt present, contact Customer Services.
8. Fill the system with freezemaster™ antifreeze. Avoid the use of contaminated hoses and equipment that have come into contact with fluids other than freezemaster™ antifreeze or water. The use of a pump with a backflow preventer and pressure capabilities to get the system to the supply pressure is recommended. For freezemaster™ antifreeze to work correctly, purge as much air as possible from the system. Accelerated corrosion may occur where air pockets exist in the system.
9. After filling the system with freezemaster™ antifreeze, test samples from the system to verify the solution has not been diluted. Take samples of the solution from a high and low point in the system. If not done so beforehand with water, perform the hydrostatic pressure test as applicable.

Existing Systems

Use the following guidelines when preparing an existing sprinkler system for freezemaster™ antifreeze installation:

1. Inspect all sprinklers for mechanical damage, corrosion and evidence of leakage. If any of these conditions are present, replace the sprinkler per NFPA 25.
2. Verify the required backflow prevention and cross connection control is in accordance with state and local requirements.
3. The system should be airtight to prevent leakage. Air vents are recommended to reduce the oxygen in the system.
4. Drain the existing antifreeze from the system in accordance with NFPA 25.
5. It is recommended that prior to filling the system with freezemaster™ antifreeze, the antifreeze is tested to verify that the specific gravity or refractive index is within the ranges specified in Table A. If the antifreeze solution is from a new, unopened factory container, this test verification is not required. If the solution is discolored or the container has dirt present, contact Customer Services.
6. Fill the system with freezemaster™ antifreeze. Avoid the use of contaminated hoses and equipment that have come into contact with fluids other than freezemaster™ antifreeze or water. The use of a pump with a backflow preventer and pressure capabilities to get the system to the supply pressure is recommended. For freezemaster™ antifreeze to work correctly, purge as much air as possible from the system. Accelerated corrosion may occur where air pockets exist in the system.
7. After filling the system with freezemaster™ antifreeze, test the system to verify the solution has not been diluted. Take samples of the solution from a high and low point in the system.

If the specific gravity or refractive index is not within the allowable range, drain the system and repeat the steps or add freezemaster™ antifreeze to displace the non-compliant antifreeze and achieve the required purity. Repeat the required tests to verify the specific gravity or refractive index are within the acceptable range. Repeat this process until the specific gravity or refractive index are within the acceptable range.

System Tag

A system tag must be present on an antifreeze system main valve identifying the following:

- Type and manufacturer of the antifreeze solution used
- Volume of antifreeze used
- Percent concentration by volume of antifreeze used

If using freezemaster™ antifreeze, the percent concentration by volume would be 100% since it is a premixed solution. A tag for inspection, testing and maintenance can also be hung at the system riser to record annual testing data. Tag design is available on freezemaster.com.

Storage

Store the product in original container and at a temperature between 30°F (-1.1°C) minimum and 100°F (37.7°C) maximum. Do not mix the product with other liquids. Eye and hand protection are recommended when handling the antifreeze solution.

Care and Maintenance

The sprinkler system owner is responsible for the inspection, testing and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable NFPA standards, in addition to the standards of any AHJ. Contact the installing contractor or product manufacturer with any questions.

Periodic testing of systems is critical to maintaining the proper concentration and freeze point of the fluid. Leaks, pressure surges and temperature changes to the system can cause antifreeze to flow out of the system or water to flow into the system, changing the freeze temperature. It is recommended that automatic sprinkler antifreeze systems be inspected, tested and maintained by a qualified inspection, testing and maintenance service, as required by NFPA 25 or the local AHJ.

Fluid Test

At least once a year, an inspection, testing and maintenance service shall take a measurement of the specific gravity or refractive index of the freezemaster™ antifreeze in the system.

The fluid must be replaced if either property deviates from that originally supplied within the allowed tolerance, as specified in Table A.

To test the freeze protection level, the correct instrument must be used. For measuring specific gravity, a laboratory grade hydrometer is used. For measuring refractive index, either an analog or a digital refractometer can be used. A detailed description of an appropriate hydrometer or refractometer can be found in the sections titled Using a Hydrometer and Using a Refractometer, respectively. These and accessories are available for purchase, as listed in the Ordering Procedure section.

It is required to have test equipment calibrated annually to reduce the risk of incorrect test results. Two test methods are acceptable per NFPA 25, and either may be used to verify that the antifreeze is within the specification limits.

NFPA requires a tag to be affixed to the riser indicating the date tested or replaced, the type and concentration by volume of fluid used, system capacity (in volume), contractor name and license number, and a statement indicating if the entire system was drained and replaced with antifreeze.

Using a Hydrometer

1. Ensure that your hydrometer measures specific gravity. The range of specific gravity measurements should cover the acceptable specific gravity range listed in Table A and the hydrometer should have increments of, at most, 0.002.
2. Ensure the main supply valve is closed prior to taking a sample to test. If the valve is open, supply water will be pulled into the system when the first sample is removed. Test

separate samples from the top of each system and at the bottom of each system, or otherwise required by applicable NFPA standards. If the most remote portion of the system or the interface with the wet pipe system is not near the top or the bottom of the system, additional samples must be checked.

3. Discharge 1/2 gal (2 L) of fluid from the fluid sampling valve connection. Collect and seal the sample in a clean and dry 3/4 gal (3 L) or larger container. Allow the sample to warm until it reaches the minimum temperature in Table C.
4. Once the solution reaches the minimum temperature, fill the 500 ml calibrated cylinder with the solution and gently insert the hydrometer into the cylinder to allow it to float. Fluid may be added to the cylinder until the hydrometer is floating. Note the specific gravity as shown on the hydrometer. Check the temperature using an appropriate thermometer.
5. Verify the specific gravity falls within the acceptable range listed in Table A. If the test results for all the samples are within the acceptable ranges, the inspection is complete.
6. If the test results from any of the samples fall outside of the acceptable ranges, drain out the system and pump in new freezemaster™ antifreeze. Take samples and test again. If the samples continue to fall outside of the acceptable specifications, the system shall be emptied and vacuumed clean of any remaining fluid. Recharge the system per the Existing System Installation section. If the samples fall within the acceptable range, top off the system to replace the liquid removed for the samples.

Using a Refractometer

1. Ensure that your refractometer is temperature compensating and that it measures refractive index. The range of refractive index measurements should cover the acceptable refractive index range listed in Table A and the refractometer should have increments of, at most, 0.0001.
2. Ensure the main supply valve is closed prior to taking a sample to test. If the valve is open, supply water will be pulled into the system when the first sample is removed. Test separate samples from the top of each system and at the bottom of each system, or otherwise required by applicable NFPA standards. If the most remote portion of the system or the interface with the wet pipe system is not near the top or the bottom of the system, additional samples must be checked.
3. Discharge 1/2 gal (2 L) of fluid from the fluid sampling valve connection. Collect and seal the sample in a clean and dry 3/4 gal (3 L) or larger container.
4. To measure the refractive index, use a digital refractometer that is temperature compensating. Fill the well in the refractometer with solution and shut the cover. Note the refractive index as shown on the refractometer. If using a manual refractometer, the device should be calibrated using distilled water.
5. Verify the refractive index falls within the acceptable range listed in Table A. If the test results for all the samples are within the acceptable ranges, the inspection is complete.
6. If the test results from any of the samples fall outside of the acceptable ranges, drain out the system and pump in new freezemaster™ antifreeze. Take samples and test again. If the samples continue to fall outside of the acceptable specifications, the system shall be emptied and vacuumed clean of any remaining fluid. Recharge the system per the Existing System Installation section. If the samples fall within the acceptable range, top off the system to replace the liquid removed for the samples.

NOTE

Contaminants or other foreign materials within a sprinkler system may adversely impact the properties and performance of freezemaster™ antifreeze. See the Installation section for instructions on flushing and recharging the system if the solution falls outside of the acceptable range since the last inspection.

NOTE

All fire protection sprinkler systems that use freezemaster™ antifreeze should conform to local, state and NFPA requirements. The use of antifreeze within these systems should also conform to all state and local health and environmental regulations for the locations where installed. Please contact your local health authorities if you have any questions concerning the codes in your area.

Disposal

Any disposal of freezemaster™ antifreeze shall be in conformance with all federal, state and local waste regulations. Refer to the freezemaster™ antifreeze Safety Data Sheet for more details.

If a small amount of antifreeze solution is spilled, absorbent towels are recommended to clean up the spill. Towels used to clean up the spill can be disposed of in the garbage. Use caution following a spill as the floor may remain slippery in the area. Consult with a local wastewater treatment plant or council for information on procedures to follow for the disposal of large amounts of wastewater.

Ordering Procedure

Contact your local distributor for availability. When placing an order, indicate the full product name and Part Number (P/N).

freezemaster™ antifreeze

Specify: freezemaster™ antifreeze, (specify net contents), P/N (specify):

5 gal (19 L) pails.....FRZ27-PP5P

55 gal (208 L) drums.....FRZ27-PTH55W

275 gal (1,041 L) IBC.....FRZ27-T275B

Testing Instruments

Recommended instruments for testing freezemaster™ antifreeze for installation or maintenance can be purchased through FISHER SCIENTIFIC, using the following part numbers:

Hydrometer 13202421
Graduated Cylinder.....115822
Thermometer.....13201647
Refractometer 12561346