## AMERFROST™ REFRIGERANTS



#### AMERFROST™ A-22 REFRIGERANT

AMERFROST A-22 refrigerant is the leading HCFC refrigerant for all types of shipboard refrigeration and air conditioning (A/C) systems. With a boiling point of -40.8°C @ 1 ATM, it is particularly useful for applications that employ reciprocating compressors.

The outstanding properties of AMERFROST A-22 refrigerant permit using smaller equipment than is possible with other refrigerants. The result is space savings onboard the vessel.

#### Refrigerant Charge (Refills in Kg)

A-22 PCN 0651019 (57Kg Refillable Cyl)

PCN 0651050 (13.6Kg Refillable Cyl)

PCN 0750019 (13.6Kg Non returnable Cyl)

#### AMERFROST™ A-22 REFRIGERANT

#### 1.1.1. 2-Tetrafluoroethane

AMERFROST A-134a refrigerant is the ozone-friendly, chlorinefree hydrofluorocarbon (HFC) that has become the new industry standard for use with medium-temperature appliances. Ideal for retrofitting CFC-12 systems, it can be used in most marine systems utilizing water-cooled condensers and reciprocating, screw, or centrifugal compressors. It is suitable for A/C and refrigeration systems with evaporator/diffuser temperatures above -23° C.

## Refrigerant Charge (Refills in Kg)

A-134A PCN 0830019 (57Kg Refillable Cyl)

PCN 0830050 (13.6Kg Refillable Cyl)

PCN 0840018 (13.6Kg Non returnable Cyl)

## AMERFROST A-404A AND AMERFROST A-507 REFRIGERANTS

#### Hydrofluorocarbon Blend

The leading medium- and low-temperature HFC refrigerants are used for both retrofitted and new refrigeration and A/C systems. They can be used in most marine water-cooled condensers and reciprocating compressors. These non-ozone depleting refrigerants are good replacements for A-22. AMERFROST A-404A and AMERFROST A-507 have a boiling point of -46.1° C @ 1 ATM\*. Although blends, these refrigerants have a relatively small temperature glide.

Refrigerant Charge (Refills in Kg)					
A-404A	PCN 0829012 (45Kg Refillable Cyl)				
	PCN 0829053 (11Kg Refillable Cyl)				
	PCN 0846016 (11.3Kg Non returnable Cyl)				
A-507	PCN 0808016 (45Kg Refillable Cyl)				
	PCN 0808099 (11.3Kg Non returnable Cyl)				

## AMERFROST A-407A, AMERFROST A-407C AND AMERFROST A-407F REFRIGERANTS

Hydrofluorocarbon Blend

Is an HFC blend that is suitable for use in low temperature and medium temperature refrigeration systems. These non-ozone depleting refrigerant are good retrofit solution for many existing A404A systems offering lower carbon footprint due to its lower Global Warming Potential and improved energy efficiency.

Refrigerant Charge (Refills in Kg)					
A-407A	PCN 0571118 (45Kg Refillable Cyl)				
	PCN 0571084 (11.3Kg Non returnable Cyl)				
A-407C	PCN 0571019 (52Kg Refillable Cyl)				
	PCN 0571050 (11.3Kg Refilable Cyl)				
	PCN 0571092 (11.3Kg Non returnable Cyl)				
A-407F	PCN 0571415 (51Kg Refillable Cyl)				
	PCN 0571423 (11.3Kg Non returnable Cyl)				

#### AMERFROST™ A-410A REFRIGERANT

### Hydrofluorocarbon Blend

AMERFROST A-410A refrigerant is a non-ozone depleting refrigerant developed for use in new air-conditioning equipment and systems. It is used in large air-conditioning systems, typically water chillers. AMERFROST A-410A refrigerant is a high-pressure, high-capacity refrigerant. Although a blend, this refrigerant exhibits no temperature glide. The boiling point of AMERFROST A-410A refrigerant is -52.7° C at 1 ATM\*.

Refrigerant Charge (Refills in Kg) PCN 0572017.

Refrigeran	t Charge (Refills in Kg
A-410A	PCN 0572017 (45Kg Refillable Cyl)
	PCN 0572058 (11Kg Refillable Cyl)
	PCN 0572090 (11.3Kg Non returnable Cyl )





#### **AMERFROST A-417A REFRIGERANT**

## Hydrofluorocarbon Blend

AMERFROST A-417A is a non-ozone depleting refrigerant, suitable as a retrofit solution to replace existing A-22 refrigeration system. It has Lower discharge pressure and temperature than A-22, which can contribute to extend compressor life.

		<u> </u>		
Retria	erant (	Charge (	(Refills)	ın Ka)

A-417A PCN 0918013 (50Kg Refillable Cyl)
PCN 0918021 (12Kg Non returnable Cyl)

# AMERFROST A-422A AND AMERFROST A-422D REFRIGERANTS

#### **Hydrofluorocarbon Blend**

AMERFROST A-422A and AMERFROST A-422D refrigerants are non-ozone depleting hydrofluorocarbon (HFC) refrigerant. It had a lower discharge temperature vs A-22, which may prolong compressor life.

Refrigerant Charge (Refills in Kg)					
A-422A	PCN 0942020 (45Kg Refillable Cyl)				
A-422D	PCN 0942012 (50Kg Refillable Cyl)				

#### **TECHNICAL INFORMATION**

REFRIGERANT TECHNICAL INFORMATION							
	A-22		A-134A		A-404A		
Chemical Formula Cylinder	CHCIF <sub>2</sub>		CF₃CH₂F		Blend		
Capacity (Water) (Liters)	56.0	13.6	56.0	13.6	56.0	13.6	
Typical Weight KG (LB)							
Gross weight with valve, without cap	84.5 (186)	23 (50.7)	84.5 (186)	23 (50.7)	72.5 (160)	20.4 (44.9)	
Net Weight	57.0 (125)	13.6 (29.9)	57.0 (125)	13.6 (29.9)	45.0 (125.0)	11 (24.2)	
*Empty weight with valve, without cap	27.5 (61)	9.4 (20.7)	27.5 (61)	9.4 (20.7)	27.5 (61)	9.4 (20.7)	
Dimensions (MM)							
Diameter	256	233	256	233	256	233	
Height with cap/valve	1370	506	1370	506	1370	506	
Color	Light Green		Sky Blue		Bright Orange		
Cylinder Approval-DOT	4BA/BW300 or ISO 4706: 2008						
Valve							
Outlet Connection	CGA 660	CGA 165	CGA 660	CGA 165	CGA 660	CGA 165	
Туре	1.030"x14 NGO	0.4375"-20 UNF	1.030"x14 NGO	0.4375"-20 UNF	1.030"x14 NGO	0.4375"-20 UNF	
	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	
Refrigerant							
Nominal Purity	99.80%	99.80%	99.80%	99.80%	99.80%	99.80%	
Stability	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	
Toxicity	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low	



## **TECHNICAL INFORMATION CONT.**

Refrigerant Technical Information						
	A-407A	A-407C		A-407F		A-410A
Chemical Formula Cylinder	Blend	Blend		Blend		Blend
Capacity (Water) (Liters)	56.0	56.0	13.6	56.0	13.6	56.0
Typical Weight KG (LB)						
Gross weight with valve, without cap	72.5 (160.0)	79.5 (175.2)	20.7 (45.6)	78.5 (173.0)	20.7 (45.6)	72.5 (160.0)
Net Weight	52.0 (114.6)	52.0 (114.6)	11.3 (24.9)	51.0 (112.4)	11.3 (24.9)	45.0 (125.0)
*Empty weight with valve, without cap	27.5 (61.0)	27.5 (61.0)	9.4 (20.7)	27.5 (61.0)	9.4 (20.7)	27.5 (61.0)
Dimensions (MM)						
Diameter	256	256	233	256	233	256
Height with cap/valve	1370	1370	506	1370	506	1370
Color	Green	Burnt Orange		Pale Green		Rose
Cylinder Approval-DOT			4BA/BW300	or ISO 4706: 2008		
Valve						
Outlet Connection	CGA 660	CGA 660	CGA 165	CGA 660	CGA 156	CGA 660
Туре	1.030"x14 NGO	1.030"x14 NGO	0.4375"-20 UNF	1.030"x14 NGO	0.4375"-20 UNF	1.030"x14 NGO
	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor
Refrigerant						
Nominal Purity	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%
Stability	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Toxicity	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low

<sup>\*</sup>Empty weight of cylinder from manufacturer ranges from 26.4Kg (58 lb) to 28.6Kg (63 lb).

Drew Marine reserves the right to refuse acceptance or exchange of a damaged, contaminated or otherwise unserviceable cylinder.



## **TECHNICAL INFORMATION CONT.**

	Refriger	ant Technical	Information		
	A-410A	A-417A	A-422A	A-422D	A-507
Chemical Formula Cylinder	Blend	Blend	Blend	Blend	Blend
Capacity (Water) (Liters)	13.6	56.0	56.0	56.0	56.0
Typical Weight KG (LB)					
Gross weight with valve, without cap	20.4 (44.9)	77.5 (170.8)	72.5 (160.0)	77.5 (170.8)	72.5 (160.0)
Net Weight	11 (24.2)	50.0 (110.2)	45.0 (125.0)	50.0 (110.2)	45.0 (125.0)
*Empty weight with valve, without cap	9.4 (20.7)	27.5 (61.0)	27.5 (61.0)	27.5 (61.0)	27.5 (61.0)
Dimensions (MM)					
Diameter	233	256	256	256	233
Height with cap/valve	506	1370	1370	1370	506
Color	Rose	Dark Green	Yellow	Pine Green	Teal
Cylinder Approval-DOT	4BA/BW300 or ISO 4706: 2008				
Valve					
Outlet Connection	CGA 165	CGA 660	CGA 660	CGA 660	CGA 660
Туре	0.4375"-20 UNF	1.030"x14 NGO	1.030"x14 NGO	1.030"x14 NGO	01.030"x14 NGO
	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor	Liquid/Vapor
Refrigerant					
Nominal Purity	99.8%	99.8%	99.8%	99.8%	99.8%
Stability	Excellent	Excellent	Excellent	Excellent	Excellent
Toxicity	Very Low	Very Low	Very Low	Very Low	Very Low

<sup>\*</sup>Empty weight of cylinder from manufacturer ranges from 26.4Kg (58 lb) to 28.6Kg (63 lb).

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