

# REFRIGERARTS WITH THE FUTURE IN MIND

# HONEYWELL REFRIGERANTS APPLICATION GUIDE - SOLSTICE® HFO PRODUCTS

COMMERCIAL REFRIGERATION											
ASHRAE #	CM/D3	Application	Devilence	Blend Composition	Typical						
	GWP <sup>3</sup>	Usage	Replaces	ASHRAE Classification	Lubricant	Comments					
Solstice® yf (R-1234yf)	1	Refrigeration Air Conditioning New Equipment	134a	HFO (single component fluid)  ASHRAE A2L	Alkylbenzene, Synthetic (POE, PAG)	Ultra-low GWP of <1. Near drop-in replacement for R-134a in automobile A/C and other applications					
Solstice® ze (R-1234ze)	1	Refrigeration		HFO		Ultra-low GWP solution offering close performance match to R-134a and to low GWP and nonflammable (A1) Solstice 515B.					
		Air Conditioning  New Equipment	- 134a	(single component fluid)  ASHRAF A21	Alkylbenzene, Synthetic (POE, PVE, PAG)						
		4.1		7.6.11.12.12		For new equipment only.					
Solstice® zd (R-1233zd)	1	HVAC ORC	R-123	HFO (Single component fluid)	Alkylbenzene Mineral oil Synthetic (POE, PVE)	Ultra-low GWP solution for low pressure chiller systems.					
		New Equipment		ASHRAE A1		For new equipment only.					
Solstice® L40X (R-455A)	146	Refrigeration	R-404A R-507 R-448A	R-32/R-1234yf/CO2	Synthetic - (POE)	R-404A like A2L refrigerant designed for low and medium temperature applications. Large allowable charge					
		New Equipment		ASHRAE A2L		size (m3) of food retail SNAP approved refrigerants (247lbs)					
Solstice® 454C (R-454C)	146	Refrigeration	R-404A R-507 R-448A	R-32/R-1234yf	Synthetic (POE)	R-404A like A2L refrigerant designed for low <b>and</b> medium temperature applications. Allowable charge size					
		New Equipment		ASHRAE A2L		(m3) in food retail applications 165lbs.					
Solstice® N71 (R-471A)	148	Refrigeration	R-134a	R-1234ze/R-227ea/ R-1336MZZe	Synthetic (POE)	The only <150 GWP, nonflammable HFO refrigerant blend designed for new equipment in medium temperature applications.					
		New Equipment	11-13-4	ASHRAE A1							
Solstice® N15 (R-515B)	299	Refrigeration Air Conditioning	R-134a	R-1234ze/R-227ea	Synthetic (POE)	Lower GWP replacement for R-134a in new systems; offers a 77%					
		New Equipment		ASHRAE A1		reduced GWP vs R134a.					
Solstice® 454B (R-454B)	466	HVAC		R-32/R-1234yf	- Synthetic (POE)	Offering 78% lower GWP vs. incumbent R-410A, Solstice R-454B is designed to replace R-410A in new equipment for comfort cooling and reversible heating applications.					
		New Equipment	410A	ASHRAE A2L							
Solstice® 513A (R-513A)	572	Refrigeration Air Conditioning	134a	R-32/R-1234yf	Synthetic (POE)	Offering 56% reduction in GWP vs. R-134a, Solstice 513A is an excellent capacity and efficiency					
		New and Retrofits		ASHRAE A1		match for R-134a in new and retrofit of existing systems					
Solstice® N40 (R-448A)	1273	Refrigeration	R-404A R-22 R-402A	R-32/R-125/ R-134a/R-1234ze/ R-1234yf	Synthetic	Lowest GWP retrofit option for R-22, R-404A, R-408A, R-402A, R-507.					
		New <sup>1</sup> & Retrofits	R-408A R-507 R-502	ASHRAE A1	(POE)	Lowest cost method to reduce overall corporate GWP.					
Solstice® 452A (R-452A)	1945	Refrigerat <b>ed</b> Transport	R-404A R-507	R-1234yf/ R-32/R-125	Synthetic (POE)	Reduced GWP replacement for 404A. Lower discharge temperatures for transport refrigeration					
		New		ASHRAE A1	(10L)						

# HONEYWELL REFRIGERANTS APPLICATION GUIDE - GENETRON® LEGACY PRODUCTS

ASHRAE	GWP	Application	Damlassa	Blend Composition	Typical Lubricant	
#	GWP	Usage	Replaces	ASHRAE Classification		
Genetron 245fa	858	HVAC ORC	R-11	HFO (single component fluid)	Synthetic	
(R-245fa)		New Equipment	R-123	ASHRAE B1	(POE, PVE)	
Genetron 134a	1300	Refrigeration Air Conditioning	R-12	R-134a	Synthetic	
(R-134a)		Existing Equipment R-409A		ASHRAE A1	(POE, PVE)	
	1674	Refrigeration R-404A R-22		R-32/R-125/ R-134a		
Genetron LT (R-407F)		Existing Equipment	R-402A R-408A R-507	R-32/R-125/ R-134a	Synthetic (POE, PVE)	
			R-507 R-502	ASHRAE A1		
		Air Conditioning		R-32/R-125	Synthetic (POE, PVE)	
Genetron AZ-20 (R-410A)	1923	New <sup>1</sup> & Existing		11 32/11 123		
		New- & Existing		ASHRAE A1		
Genetron 404A	0010	Refrigeration	R-502 R-402A	R-125/R-143a/ R-134a	Synthetic	
(R-404A)	3943	Existing Equipment	R-408A R-507	ASHRAE A1	(POE, PVE)	

The information provided herein is believed to be accurate and reliable, but is presented without guarantee or warranty of any kind, express or implied. User assumes all risk and liability for use of the information and results obtained. Statements or suggestions concerning possible use of materials and processes are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated herein, or that other measures may not be required. Above information is based on US applications/regulations.

<sup>1</sup>Listing of GWP Values as per Report IPCC WG1 AR5 (100-yr time horizon)

<sup>2</sup>Check with the compressor manufacturer for their recommended lubricant



Although Honeywell International Inc. believes that the information contained herein is accurate and reliable, it is presented without guarantee or responsibility of any kind and does not constitute any representation or warranty of Honeywell International Inc., either expressed or implied. A number of factors may affect the performance of any products used in conjunction with user's materials, such as other raw materials, application, formulation, environmental factors and manufacturing conditions among others, all of which must be taken into account by the user in producing or using the products. The user should not assume that all necessary data for the proper evaluation these products are contained herein. Information provided herein does not relieve the user from the responsibility of carrying out its own tests and experiments, and the user assumes all risks and liabilities (including, but not limited to, risks relating to results, patent infringement, regulatory compliance and health, safety and environment) related to the use of the products and/or information contained herein.

### For more information visit

www.advancedmaterials.honeywell.com

### Honeywell Refrigerants

115 Tabor Road Morris Plains, NJ 07950 800-631-8138 FUTURE IS WHAT WE MAKE IT

