



# FORANE<sup>®</sup> 507A

- Non-ozone depleting refrigerant.
- Azeotropic blend (same behavior as a single component fluid).
- Specifically designed for use in medium and low temperature refrigeration systems.

## MAIN PROPERTIES

Composition	 R-125 (50%)	 R-143a (50%)
Type	HFC Azeotropic blend	
ASHRAE safety classification	A1 - non-toxic and non-flammable	
GWP*	3985	
Recommended lubricant	POE	

\* GWP value for 100-year time horizons according to IPCC 2007 Fourth Assessment Report

## MAIN APPLICATIONS

- Commercial and industrial refrigeration
- Food display and storage cases
- Cold storage rooms
- Process refrigeration
- Transport refrigeration

## LUBRICATION

Forane<sup>®</sup> 507A requires Polyolester (POE) lubricant to ensure complete miscibility between oil and refrigerant. Miscibility is important for oil return to the compressor, especially in large systems with long runs of piping.

## CHARGING

Forane<sup>®</sup> 507A is classified as an azeotropic blend. Azeotropic blends are refrigerant mixtures that behave as single component refrigerant. Users may charge Forane<sup>®</sup> 507A the same as any single component refrigerant using either vapor or liquid to charge the system. If there is a leak in a Forane<sup>®</sup> 507A system, simply fix the leak and top off the charge using either vapor or liquid.

## DELIVERIES

Forane<sup>®</sup> 507A can be delivered in various packaging:

- **bulk:** ISO container (18 tons) or ton-tank (720 kg).
- **pallet of 40 or 100 disposable cylinders** (11.3 kg each cylinder). This disposable packaging is commercialized according to local regulations.
- **other packaging available under requests.**

## THERMODYNAMIC PROPERTIES

This information is based on values calculated using the NIST REFPROP Database (NIST Standard Reference Database 23, Version 9.0, Lemmon, E. W., Huber, M. L., and McLinden, M. O., Thermophysical Properties Division, 2010).

Critical temperature: 71°C

Saturation points (bubble and dew points at same composition).

Temperature (°C)	Pressure (bar)	Liquid Phase Density (kg/m <sup>3</sup> )	Vapor Phase Density (kg/m <sup>3</sup> )	Liquid Phase Enthalpy (kJ/kg)	Vapor Phase Enthalpy (kJ/kg)	Liquid Phase Entropy (kJ/(kg.K))	Vapor Phase Entropy (kJ/(kg.K))
-40	1,4	1296	8	147	340	0,79	1,62
-35	1,7	1280	9	154	343	0,82	1,62
-30	2,1	1263	11	160	346	0,85	1,61
-25	2,6	1247	14	167	349	0,87	1,61
-20	3,1	1229	16	173	352	0,90	1,60
-15	3,8	1212	20	180	354	0,92	1,60
-10	4,5	1194	23	186	357	0,95	1,60
-5	5,3	1175	27	193	360	0,97	1,60
0	6,2	1156	32	200	362	1,00	1,59
5	7,3	1137	38	207	364	1,02	1,59
10	8,5	1116	44	214	367	1,05	1,59
15	9,8	1094	51	221	369	1,07	1,59
20	11,2	1072	59	229	371	1,10	1,58
25	12,8	1048	69	236	373	1,12	1,58
30	14,6	1023	80	244	374	1,15	1,58
35	16,5	995	92	252	375	1,17	1,58
40	18,7	966	107	260	376	1,20	1,57
45	21,0	934	125	268	377	1,23	1,57
50	23,6	898	146	277	377	1,25	1,56
55	26,4	856	173	287	376	1,28	1,55
60	29,5	806	208	297	373	1,31	1,54
65	32,8	739	261	309	368	1,35	1,52

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See MSDS for Health & Safety Considerations