R410A Refrigerant Transition Quick Guide

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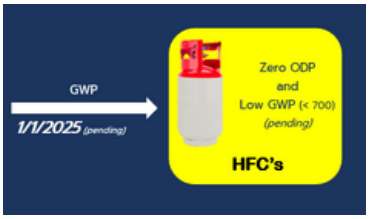


Two Leading "Low GWP" Candidates to Replace R410A

Refrigerant	GWP	ODP
R-410A	2,088	0
R-22	1,810	.055
700 GWP Limit		
R-407C	1,774	0
R-32	675	0
R-454B	466	0
R-290 (propane)	3.3	0
R-744 (CO_2)	1	0

EPA NOPR

Equipment Manufacturing Deadlines
Jan 1, 2025, Chillers
Jan 1, 2025, Residential / Commercial
Jan 1, 2026, VRF

High GWP Refrigerant Production
40% by 2024
70% by 2029

EPA NOPR (Notice of Proposed Rule)
Some states have a 01.01.24 deadline for chillers.

R410A vs R454B vs R32

Fluid	ASHRAE 34	GWP	Component Mix - Ratio %	Operating Pressure
		CO_2e		psia
R410A	A1	2,088	R-32/R-125 - 50/50	434
R454B	A2L	466	R-32/R-1234yf - 69/31	405
R32	A2L	675	R-32 - 100%	444

Fluid	ASHRAE 34	Efficiency	Capacity
		vs R410A	vs R410A
R410A	A1	-	-
R454B	A2L	=	<
R32	A2L	+	+

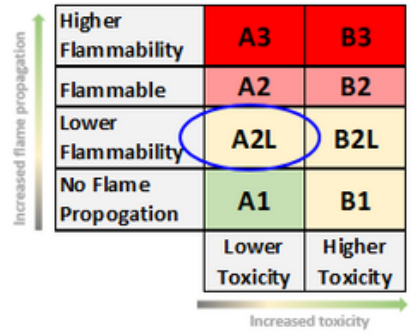
Training Resources

YouTube R410A Transition Videos

R410A Transition Podcast

Contact your local Hobbs & Associates Account Executive for the most current information hobbsassociates.com

ASHRAE 34



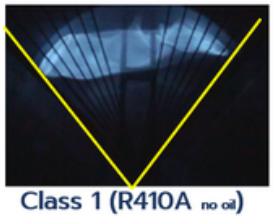
ASHRAE 34-2022, Designation and Safety Classification of Refrigerants, which describes a shorthand way of naming refrigerants and assigns safety classifications based on toxicity and flammability data.

A = non-toxic,
2 = flammable,
L = low burning velocity

Type of Oil?

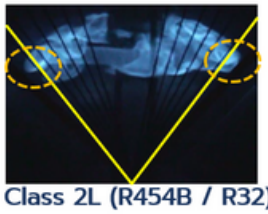
R-32 has a Poe oil of 46; it's much heavier because it runs hotter on the discharge line. R-410A and R-454B have Poe 32.

ASHRAE Refrigerant Flammability



Class 1 (R410A no oil)

ASHRAE Refrigerant Flammability



Class 2L (R454B / R32)

ASHRAE Refrigerant Flammability

Class 3 (Propane)

Above demonstrates flame propagation difference between A1, A2L, and A3 refrigerants. Note, there is very little difference between A1 and A2L. NOTE: None of these have oil.