



# Koura R-456A and R-444A

## Koura Appliance Refrigerants

Koura has over 50 years of experience delivering high-performing, sustainable refrigerant solutions to solve thermal management challenges. We leverage our technical and market expertise to deliver the best outcome for both our customers and their consumers.

R-456A and R-444A are high-performing, lower-GWP replacements for R-134a and R-1234yf [respectively] for residential and commercial hot water heater, commercial clothing dryer, and other applications where non-flammability or 2L flammability is preferred over propane.

Key benefits include:

### R-456A (GWP 687)

- ✓ GWP reduction of >50% over R-134a
- ✓ Minimal changes from R-134a system design
- ✓ Non-flammable safety classification, same as R-134a

### R-444A (GWP 93)

- ✓ Higher performance and efficiency\* than R-1234yf
- ✓ Minimal changes from R-1234yf system design
- ✓ A2L flammable classification, same as R-1234yf (10% higher LFL than R-1234yf)

\*Based on third party test data from automotive application.



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# Koura Appliance Refrigerant Physical Properties

°F	R-456A	
	(psig)	(barg)
-10	1.4	0.1
0	5.8	0.4
20	17.4	1.2
40	33.6	2.3
60	<b>66.2</b>	<b>4.6</b>
80	<b>97.1</b>	<b>6.7</b>
100	<b>136.1</b>	<b>9.4</b>
120	<b>184.5</b>	<b>12.7</b>
140	<b>243.4</b>	<b>16.8</b>
150	<b>277.3</b>	<b>19.1</b>

°F	R-444A	
	(psig)	(barg)
-10	0.6	0.0
0	4.9	0.3
20	16.0	1.1
40	31.6	2.2
60	<b>76.3</b>	<b>5.3</b>
80	<b>109.1</b>	<b>7.5</b>
100	<b>150.0</b>	<b>10.3</b>
120	<b>199.9</b>	<b>13.8</b>
140	<b>259.9</b>	<b>17.9</b>
150	<b>294.1</b>	<b>20.3</b>

\*Calculated using REFPROP 10  
Black - vapor, Bold - liquid

## Features and benefits

- R-444A does not decompose into TFA and has not been observed to polymerize
- R-456A uses the same charge amount as R-134a
- R-444A uses the same charge amount as R-1234yf
- R-444A offers up to 10% higher cooling/heating capacity\* in direct replacement scenarios
- R-444A complies with the EPA Technology Transitions rule for applications requiring GWP < 150

\*Based on third party test data from automotive application

For more information, contact [info@kouraglobal.com](mailto:info@kouraglobal.com) Safety Data Sheets available at [kouraglobal.com](http://kouraglobal.com)

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