



# Koura R-485A

## Koura Low-Temperature Commercial & Residential Heat Pump Refrigerant

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.

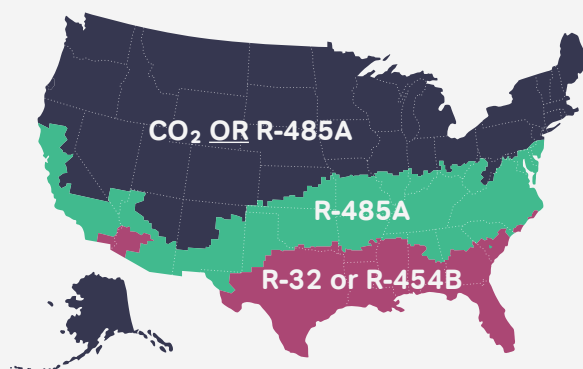
R-485A is a high-performing, enhanced CO<sub>2</sub> refrigerant for heat pump and A/C systems designed for R-744 refrigerant (CO<sub>2</sub>). R-485A is a completely non-PFAS blend that extends the applicability range closer to the US Gulf Coast.



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This gives manufacturers the flexibility to achieve a single system design that could be charged with either CO<sub>2</sub> or R-485A. R-485A provides a higher efficiency option, while CO<sub>2</sub> offers a so-called “natural” option\* with an efficiency penalty.



\* CO<sub>2</sub> refrigerant, R-744, is currently produced from either collecting combustion gases during electricity generation or from fracked natural gas during ammonia production for fertilizers.

## Koura R-485A Refrigerant Physical Properties

Property	Units	R-744	R-485A
GWP		1	143
Molecular Mass	g/mol	44.0	47.0
Critical Temperature	°C	31.0	41.2
Critical Pressure	kPa	7377	7170
Liquid Density (0 °C)	kg/m <sup>3</sup>	927	935
Bubble Pressure (-40 °C)	kPa	1004	842
Bubble Pressure (0 °C)	kPa	3485	2875
Isentropic Index (Cp/Cv) (Saturated at 0 °C)	---	2.14	1.7
Latent Heat at 0 °C	kJ/kg	231	245
Evaporator Glide (2800 kPa)	K	0	7

## Key benefits include:

- GWP < 150
- Can be non-flammable in handling and application
- 20-25% higher efficiency over CO<sub>2</sub> systems (can achieve R-410A efficiency in regions outside US Gulf Coast)
- 10% lower pressure than CO<sub>2</sub> with a higher critical point for more effective heat transfer
- Flexibility of charging: system can charge with either R-485A or CO<sub>2</sub> by changing only the compressor operating profile
- Uses same oils as CO<sub>2</sub>

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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