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Koura

Koura Klea® 456A

Next Generation Refrigerant for the Automotive Aftermarket

Koura has over 50 years of experience delivering trusted solutions, with innovation, sustainability and customer focus driving our approach.

Our latest innovation for the automotive aftermarket, Klea® 456A is our new, direct replacement for R-134a for the automotive aftermarket. 456A extends refrigerant availability* with 50%** of the global warming potential of R-134a.

Compatible with R-134a servicing equipment, Klea® 456A's ease of use and low GWP supports the ever-increasing demand for sustainable solutions now and into the future.

*456A allows older vehicles previously charged with R-134a to age gracefully over the vehicle's lifetime.
**456A enables a 50% global warming potential reduction vs R-134a resulting in increased availability in regions with HFC phasedowns.

Application

Automotive Aftermarket

Klea® 456A | Physical Properties

Property	S.I. Units	Value	British Units	Value
Molecular Weight	kg/kmol	101.42	lbm/lbmol	101.42
Critical Temperature	°C	102.1	°F psia	215.9
Critical Pressure	bara	41.38	lb/ft^3	600
Critical Density	kg/m^3	491	°F	30.7
Normal Boiling Point	°C	-30.8		-23.4
Latent Heat of Vapourisation at Atmospheric Pressure	kJ/kg	217	BTU_{IT}/lb	93.4
Saturated Vapour Density at Atmospheric Pressure	kg/m^3	5.2	lb/ft^3	0.325
Liquid Vapour Pressure at 25°C	bara	7.36	psia	106.7
Coefficient of Volumetric Thermal Expansion for Saturated Liquid at	$°C^{-1}$	0.00323	$°F^{-1}$	0.0018
Speed of Sound* for Saturated Vapour at 25°C	m/s	145	ft/s	477
Adiabatic Exponent* for Saturated Vapour at 25°C		1.22		1.22
Latent Heat of Vapourisation at 25°C	kJ/kg	176	BTU_{IT}/lb	75.8
Saturated Vapour Density at 25°C	kg/mk^3	31	lb/ft^3	1.93
Saturated Vapour Density at 0°C	g/m^3	13.8	lb/ft^3	0.864

* Vapour composition as per bulk refrigerant at dew

FAQ

Can you drop R-1234yf into R-134a vehicles?
No, R-1234yf is flammable. R-456A was developed as a direct replacement for 134a into existing systems with no system changes needed.

Does 456A require a unique fitting?
Koura's position is that R-456A does not require a new fitting. We are petitioning EPA to use the 134a fitting to speed market adoption and capture environmental benefit under than AIM Act. The existing refrigerant should be fully evaculated and replaced with 456A. A label denoting 456A is required.

Will 456A and R-444A work in EVs?
The majority of EVs use R-1234yf; R-444A will for YF-containing EVs; 456A will work for existing 134a EVs as well.

What happens to performance when it leaks compared with R-134a?
The consumer will notice a performance drop due to bulk 456A leaks on the order of 134a. A system recharge can correct this.

Can an existing charge cart handle a blended refrigerant?
Yes, a R-134a charge cart will handle R-456A. Koura has verified this with a large equipment manufacturer.

For more information, contact **sales@lenzdist.com**. Safety Data Sheets available at **kouraglobal.com**.

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Lenz

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