

# GRITENE® ICT-32

## HEAT TRANSFER FLUIDS



**GRITENE® ICT-32** is a blend of fluorinated components, non-flammable, non-toxic with a GWP of less than 50 developed as a heat transfer fluid for very low temperature applications. On the other hand, its low electrical conductivity makes it a product suitable for applications with electronic equipment.

### Advantages of GRITENE® ICT-32

- Good viscosity at low temperatures.
- Non-flammable and has no flash point nor flammability limits.
- Non-toxic and non-corrosive.
- Global Warming Potential (GWP) less than 50.
- Good thermal conductivity and volumetric heat.
- Very low water content certified by certificate of analysis (CoA) with typical values of less than 20ppm.
- Dielectric strength between 30 and 40 kV.

### Main applications

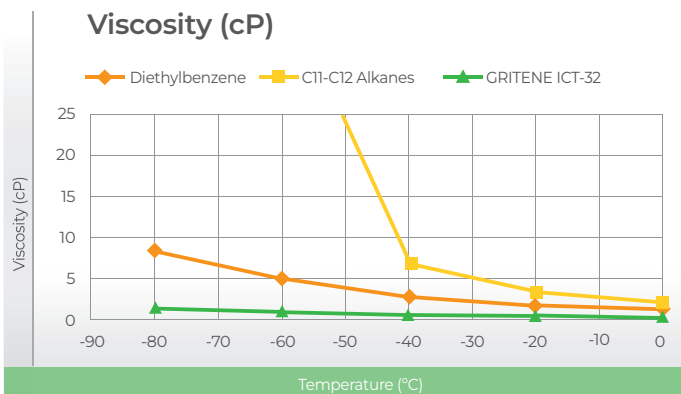
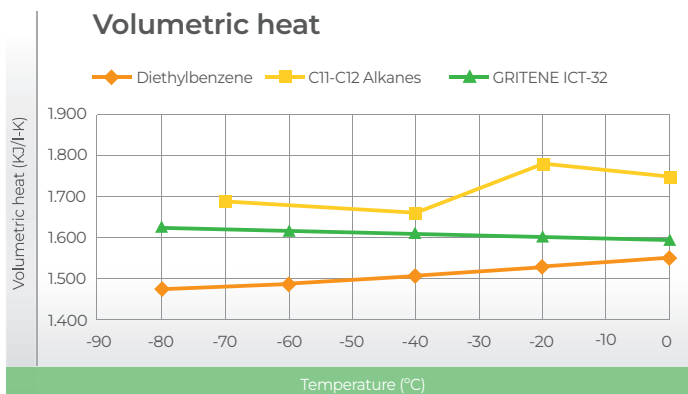
- Cold tunnels for the food industry.
- Very low temperature chambers.
- Data centers.
- Secondary systems where non-flammable and non-toxic solutions are required.

### Main Characteristics

The main characteristics of **GRITENE® ICT-32** and a comparison with other heat transfer fluids available for very low temperatures can be seen below:

	GRITENE® ICT-32	Diethylbenzene	Isoalkanes C11-C12	units
Freezing point	-92	-81	-85	°C
Boiling point	22	181	195	°C
Flash point	N/A	57	64	°C
Density (0°C)	1362	893	770	kg/m <sup>3</sup>
Thermal Conductivity (0°C)	0.0873	0.1326	0.12	W/m·K
Specific heat (0°C)	1.17	1.77	2.27	kJ/kg·K
Volumetric heat (0°C)	1.59	1.58	1.75	kJ/l·K

As can be seen below, **GRITENE® ICT-32** has low viscosity at very low temperatures, which makes it easy to pump and reduces the energy consumed in its propulsion, on the other hand, due to its high density, it has a high volumetric heat, which allows evaporators and pipes to be smaller in size.



Thanks to its formulation, **GRITENE® ICT-32** is fully compatible with the most commonly used metals, such as stainless steel, carbon steel, copper and aluminum. With regard to compatibility with plastics and elastomers, the compatible materials are listed below:

#### COMPATIBILITY WITH PLASTICS

PMMA	Polypropylene	PVC
Epoxy	Polyethylene (HDPE)	Nylon
Glass fibre	Polyethylene (LDPE)	PTFE
Polyester	Polycarbonate	

#### COMPATIBILITY WITH ELASTOMER

Viton	Neoprene
EPDM	Natural rubber
Nitrile rubber	Butyl rubber

## Delivery formats

The product can be supplied in 900-liter bottles pressurized with nitrogen to ensure quality at the moisture content and make it easy to empty the product without pumps. For small quantities, the product can be supplied in 61-liter bottles.

## Storage and transport

The product is stable and can be stored for long periods without affecting its composition. It should be stored with the valves closed and the valve caps installed. A product without nitrogen pressurization is not considered dangerous cargo.

## More information...

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