

## CASSIDA FM HEAT TRANSFER FLUID 32

Heat transfer fluid for use in food manufacturing industry

### Performance Features

- Wide temperature range for application
- High temperature and oxidation stability
- Neutral odour and taste



High temperature



Partner Programme



NSF registered

### Certifications and Specifications

- NSF HT1
- NSF ISO 21469
- Kosher
- Halal
- DIN 51522 Q
- ISO 6743-12 QC/QE

### Description

CASSIDA FM HEAT TRANSFER FLUID is designed for closed circuit and pressureless heat transfer systems. It is based on a careful blend of highly refined oils and additives chosen for their ability to meet the stringent requirements of the food industry. Certified by NSF for ISO 21469 and registered by NSF (Class HT1) for use where there is potential for incidental food contact. Produced according to FLT Quality Standards, in facilities where HACCP audit and Good Manufacturing Practice have been implemented and form part of the quality and hygiene management systems ISO 9001 and ISO 21469.

# Product Information



**LUBRITECH**  
Special Application Lubricants

## Applications

Heat transfer systems with a bulk oil temperature range of approximately -10 °C to max. +325 °C where the surface temperature of the heating elements (oil film temperature) should not exceed +340 °C

## General Instructions

Care should be taken to ensure sufficient flow rate to avoid even a temporary overheating of the CASSIDA FM HEAT TRANSFER FLUID 32. Reynolds-Number should be >10,000 (ten thousand). This is most important during start up and shut down of the heating system. The surface temperature of the heating elements (film temperature) should not exceed +340 °C. For physical parameters of the oil necessary for the calculation of the heat transfer coefficient in the system, such as density, specific heat and coefficient of thermal conductivity please contact your local partner. To ensure maximum lifetime it is recommended to monitor the oil periodically. For cleaning and flushing of contaminated heat transfer systems the use of FM FLUSHING FLUID 32 is recommended.

## Seal and Paint Compatibility

Compatible with the elastomers, gaskets, seals and paints normally used in food machinery lubrication systems.

## Handling and Storage

All food grade lubricants should be stored separately from other lubricants, chemical substances and foodstuffs and out of direct sunlight or other heat sources. Store between 0 °C and +40 °C. Provided that the product has been stored under these conditions we recommend to use the product within 5 years from the date of manufacture. Upon opening a pack, the product must be used within 2 years (or within 5 years of date of manufacture, whichever is the sooner).

## Technical Data: CASSIDA FM HEAT TRANSFER FLUID 32

Characteristics	Value	Unit	Test Method
NSF Reg. No.	144719		
Colour	Colourless		
Density [+15 °C]	869	kg/m <sup>3</sup>	ISO 12185
Density [+20 °C]	865	kg/m <sup>3</sup>	ISO 12185
Density [+60 °C]	840	kg/m <sup>3</sup>	ISO 12185
Flashpoint	218	° C	ISO 2592
Fire Point	256	° C	ISO 2592
Pourpoint	-15	° C	ISO 3016
Max. oil film temperature*	340	° C	
Max. bulk oil temperature	325	° C	
Kin. Visc. [+40 °C]	35	mm <sup>2</sup> /s	ISO 3104
Kin. Visc. [+100 °C]	5,8	mm <sup>2</sup> /s	ISO 3104
Operating temperatures	0 to +325	° C	LLS 134
short-term peak	-10/+340	° C	
Specific heat [+40 °C]	1,76	kJ/kg K	ASTM-E-1269-01
Specific heat [+100 °C]	2,03	kJ/kg K	ASTM-E-1269-01
Specific heat [+200 °C]	2,37	kJ/kg K	ASTM-E-1269-01
Coefficient of thermal expansion per °C	0,000760		

\* Oil film temperature is the surface temperature of the heating elements.

LLS = LUBRITECH Laboratory Specification

Typical for current production. Variations in these characteristics may occur.

$$Re = \frac{V \times D}{\text{kin.Visk.}}$$

Re = Reynolds number

V = Speed of heat transfer fluid in the pipe (m/s)

D = Pipe diameter (m)

kin.Visk. = kinem. viscosity (m<sup>2</sup>/s) [at temperature of system]

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As far as we know this information reflects the current state of knowledge and our research. It cannot, however, be taken as an assurance about the properties nor as a guarantee of the suitability of the product for the individual case in point. Before using our products the purchaser must, therefore, check their suitability and be satisfied that the output will be satisfactory. Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without prior announcement, unless otherwise provided in customer-specific agreements. With the publication of this product information sheet, all previous editions cease to be valid.

We are specialized in developing products for extreme tribological problems in cooperation with end users. FUCHS LUBRITECH provides service and individual advice. Please contact us!  
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