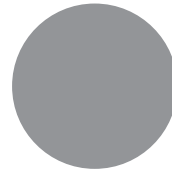


# CASSIDA FLUID DC 32

## Product Information

Synthetic direct contact fluid for food processing applications in the food manufacturing industry



**CASSIDA FLUID DC 32** is a multipurpose fluid designed for a number of special applications in the food manufacturing industry, including absorber oil for edible oil solvent recovery systems, can-forming and closed circuit / pressure less heat transfer systems. The fluid has been specially developed to meet the stringent requirements of the food industry.

It is based on a careful blend of synthetic fluids chosen for their ability to meet the stringent requirements of the food industry.

Certified by NSF for ISO 21469 and registered by NSF for use in both direct contact applications (Class 3H) and where there is potential for incidental food contact (Classes H1 and HT1). 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.

### CERTIFICATIONS AND SPECIFICATIONS

- NSF 3H, H1, HT1
- NSF ISO 21469
- Kosher
- Halal



## PERFORMANCE FEATURES

- Registered for direct food contact
- Low volatility resulting in reduced carryover into edible oil product when used as absorber oil
- High viscosity index results in minimum variation of viscosity with change in temperature. This facilitates pump selection.
- Wide temperature range for application
- High temperature and oxidation stability
- Neutral odour and taste

## OPERATING GUIDELINES

When used as a heat transfer fluid, care should be taken to ensure sufficient flow rate to avoid even a temporary overheating of the heat transfer fluid. 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 +320 °C. The 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 are indicated in the table below.

## 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).

## APPLICATIONS

- Absorber oil for edible oil extraction plant solvent recovery systems
- Release agent used on grills, loaf pans, cutters, boning benches, chopping blocks or other hard surfaces to help prevent food from adhering during processing
- Forming oil for the manufacture of both two and three piece cans for food and beverages
- Heat transfer systems in the food industry with a bulk oil temperature range of approximately -30 °C to +280 °C where the surface temperature of the heating elements (oil film temperature) should not exceed +320 °C

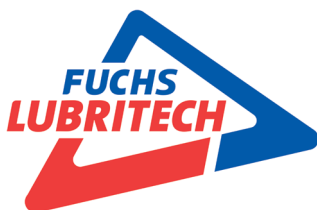
TYPICAL CHARACTERISTICS (Typical for current production. Variations in these characteristics may occur.)		
		CASSIDA FLUID DC 32
Property	Test Method	
NSF Reg. No.		144688
Colour		Colourless
Density at +15 °C	kg/m <sup>3</sup>	ISO 12185 827
Flashpoint	°C	ISO 2592 230
Pourpoint	°C	ISO 3016 -60
Kin. Visc. at +40 °C	mm <sup>2</sup> /s	ISO 3104 32
Noack Volatility	%m	CEC-L-40-93b 7
Maximum oil film / bulk oil temperature*	°C	320/280

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

PARAMETERS FOR THE CALCULATION OF THE SYSTEM				
Temperature	Density	Specific heat	Thermal conductivity	Kinematic viscosity
t °C	ρ kg/m <sup>3</sup>	c kJ/(kg.K)	λ W/(m.K)	mm <sup>2</sup> /s
0	835	2,07	0,150	218
20	824	2,12	0,148	70
60	799	2,29	0,146	15
100	774	2,42	0,144	6,0
150	742	2,55	0,141	-
200	713	2,79	0,139	-
250	683	2,92	0,137	-
300	652	3,16	0,135	-

$$Re = \frac{v \cdot d}{kin. Visc.}$$

Re = Reynolds-Number  
 v = Speed of heat transfer fluid in the pipe (m/s)  
 d = pipe diameter (m)  
 kin. Visc. = kinem. viscosity (m<sup>2</sup>/s) [at temp. of systems]



**FUCHS LUBRITECH GMBH**  
 Werner-Heisenberg-Straße 1  
 67661 Kaiserslautern / Germany  
 T: +49 (0) 6301 3206-0 / F: +49 (0) 6301 3206-940  
 www.fuchs-lubritech.com

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As far as we know these information reflect the current state of knowledge and our research. They 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 the suitability and be satisfied that the output will be satisfactory. Our products are continually being up-dated. We reserve the right, therefore, to alter the information of this product information at any time and without prior announcement. 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! E-Mail: cassida.lubricants@fuchs-lubritech.de