

Foodoil ST 32

Art. 714

Description: Foodoil ST 32 is an NSF H1-approved synthetic heat transfer fluid specifically for the food, animal feed and pharmaceutical industries and their suppliers.

Applications: Foodoil ST 32 can be used for heat transfer in closed oil-filled systems in production plants, heat recovery systems, oil-fired room heating systems, and generally in oil-filled heaters, etc.

Product characteristics

Benefits

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|---|---|
| – Lubricant complying with FDA regulation No. 21 CFR 178.3570, NSF H1-registered, odourless and tasteless. | → High security against product contamination. Facilitates compliance with hygiene regulations as per Foodstuffs and utility articles ordinance (LGV). Supports the duty of care and compliance with the quality management according to DIN EN ISO 9001. |
| – Excellent oxidation resistance also at very high thermal loading. Free of esters, vegetable and animal raw materials. | → For long service life, system cleanliness and trouble-free operation. Minimizes sludge and deposits. |
| – Efficient thermal transport and heat transfer. | → Constant transfer properties improve plant operation and save heating energy. |
| – Optimal corrosion protection of steel, grey and nodular cast iron, bronze and aluminium alloys. | → Contaminated materials are dependably protected against corrosion. |
| – Does not affect normal seal materials and paint coatings. | → No plant retrofit or rebuild required. |
| – Miscible and compatible with residues of conventional mineral oil based lubricants | → Simpler oil changeover in existing systems. However, food law requirements as per FDA Regulation 21 CFR 178.3570/ NSF H1 are only met with unmixed fluid. |
| – Product is free of mineral oil | → This product meets the current oil technology health-related findings for the food, animal feed and pharmaceutical industries and their suppliers. |

- Correct use:**
- Miscible and compatible with conventional mineral oil based heat transfer oils. However, food law requirements as per FDA Regulation 21 CFR 178.3570 / NSF H1 are only met with unmixed Foodoil ST. Residues of previous oil must therefore be minimized.
 - Product selection depends on the plant type and concept and on the highest / lowest operating temperatures. System design and layout should be based on the thermal data set out below.
 - The lowest application temperature is given by the oil viscosity and the maximum viscosity limit of the circulating pump.
 - For cold start-up, please ensure adequate flow velocity in the heating radiators to prevent even temporary overheating.
 - The highest application temperature depends on the thermal stability of Foodoil ST and its viscosity. The maximum surface temperature (film temperature / wall temperature in the heat transfer zone) must not be exceeded, otherwise cracking (oil molecule breakdown) may cause the formation of undesirable gaseous, liquid and solid components.
 - NSF H1 applies to: lubricants where possible contact with food / animal feed / pharmaceutical products cannot be excluded.

Physical-chemical data: See overleaf

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Physical-chemical data:	Blend type:	Q HC	DIN 51502
	Colour, appearance:	colourless, clear	
	Viscosity at 40° C:	VG 32	DIN ISO 3448
	Viscosity at 100° C:	5.8 mm ² /s	DIN 51562
	Viscosity index VI:	130	DIN ISO 2509
	Density at 20° C:	0.824 g/ml	DIN 51757
	Pourpoint:	< -54° C	DIN ISO 3016
	Flashpoint:	240° C	DIN ISO 2592
	Max. admissible feed temperature:	320° C	
	Max. admissible surface temperature of heating element (film temperature / wall temperature) in the heat transfer zone	340° C	

Thermal data:

Temperature	Kin. viscosity	Density	Specific heat	Specific heat conductivity	Prandtl number
t [°C]	v [mm ² /s]	p [kg/m ³]	cp [J/kg°K]	λ [W/m°K]	Pr
20	73.3	824	2411	0.140	1040
40	30.2	812	2483	0.138	441
60	15.3	800	2556	0.137	228
80	8.94	787	2628	0.135	137
100	5.79	775	2701	0.134	90
120	4.04	763	2773	0.132	65
140	2.98	750	2846	0.131	49
160	2.3	738	2918	0.129	38
180	1.84	726	2991	0.128	31
200	1.51	714	3064	0.126	26
220	1.27	701	3136	0.125	22
240	1.08	689	3209	0.123	19
260	0.94	677	3281	0.122	17
280	0.83	665	3354	0.120	15
300	0.74	652	3426	0.119	14
320	0.67	640	3499	0.117	13
340	0.61	628	3572	0.116	12

Safety and environmental aspects:

ARD / RID:	Not classified as hazardous by transport regulations
Precautions:	Do not allow product to reach ground water, water course or sewage system. Harmful to aquatic organisms.
Water hazard class:	slightly water endangering (WGK 1)
LVA/EU-waste code:	13 03 08
Classification and labeling:	stated in the safety data sheet

**Container sizes:**

Drum: 208 l

Canister: 5 l • 25 l

The data given on this sheet are based on properties and application possibilities as known to us. Blaser Swissslube AG cannot be held liable for any damages resulting from the improper use of its products. No general legal liability can be derived from these data.

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