

Foodoil SC 01

Art. 670

Description: Foodoil SC 01 is a NSF HT1 registered thermofluid for the food, animal feed and pharmaceutical industries and their suppliers. Foodoil SC 01 is free of potentially hazardous substances such as nitrites, amines and nitrates.

Application: – Foodoil SC 01 can be used without restriction for cooling and heating in secondary refrigeration circuits within a temperature range of -50°C to +170°C. Typical applications are iced water production, cooling in beverage production and processing, bakery and confectionery processing and storage systems, and as sealing liquid. Foodoil SC 01 is also used for indirect deep-freezing in the meat and fish processing industry.

Product characteristics

- Thermofluid corresponding to the FDA regulation 21 CFR 178.3570, NSF HT1 registered, odourless and tasteless
- Excellent compatibility with metals
- High-alkalinity concentrate
- Low-foaming

Benefits

- High security against product contamination. Facilitates compliance with hygiene regulations as per LMV foodstuff decree (Hazard Analysis and Critical Control Point HACCP). Supports the duty of care and compliance with the quality management according to DIN EN ISO 9001.
- Active inhibitors against acidic decomposition products ensure dependable protection against corrosion and sludge formation, also in long-term use
- Reserve alkalinity neutralizes any acidic decomposition products nevertheless formed
- Efficient anti-foaming additives against foaming during agitation

General notes on application:

First determine the optimal concentration according to application. The degree of dilution mainly depends on the desired antifreeze temperature limit. Mixing more than 60 vol. % Foodoil SC 01 in water is not recommended. It does not improve antifreeze temperature limit.

Concentration in vol.-%:	25	30	35	40	45	50	55	60
Crystallisation point ⁽¹⁾ in °C:	-10.7	-14.0	-17.6	-21.5	-26.0	-32.4	-40.4	-48.4
Freezing point in °C:	-11.5	-15.0	-19.0	-23.7	-29.6	-38.2	-48.5	<-50
Pour point in °C:	-12.3	-16.0	-20.4		-33.3	-44	<-50	<-50

⁽¹⁾ as per ASTM D 1177

Note: the term "antifreeze" can be interpreted variously:

- Crystallization point: where ice crystal formation begins in the heat transfer medium. Antifreeze protection is measured here by hand-held refractometer (propylene glycol scale) with a precision tolerance of 1-2 degrees. This reading provides a reasonable safety margin against fluid frosting.
- Frosting point: the antifreeze mixture becomes a pumpable mush of ice crystals. This can be tolerated for a short while, but not for ongoing operation.
- Freezing point: the ice crystal mush solidifies.
- Mix with softened water at 5.0° fH (2.8° dH), max. 50 mg/l chloride content and max. 10µS/cm electrical conductivity.
- NSF-HT1 means: Heat transfer fluids, where the possibility of incidental contact with foodstuffs/ animal feed/ pharmaceutical products cannot be excluded.

Anticorrosion performance data:

See overleaf

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Anticorrosion performance data:**Corrosion test as per ASTM D 1384**

Metal or alloy	Mass reduction in mg/section ⁽¹⁾	Comparison product ⁽²⁾	Upper limit (max.)
Brass	-1	-2	-10
Copper	-2	-11	-10
Solder	-4	-2	-30
Steel	-1	0	-10
Cast iron	-1	-1	-10
Cast aluminium	-4	-24	-30

(1) Mass reduction after chemical cleaning as per ASTM. Mass increases are indicated as "-". Mass reduction in g/m² = 3.076 x mass reduction in mg/section

(2) The comparison product is based on industrial propylene glycol

Solubility: Miscibility with water: can be mixed at all ratios

Compatibility and oil change regulations:

Foodoil SC 01 can be mixed with most commercial heat transfer fluids based on propylene glycol. However, for optimal system protection we recommend exclusively using Foodoil SC 01. Foodoil SC 01 is also miscible and compatible with ethylene glycol based products. If Foodoil SC 01 is mixed with ethylene glycol, the antifreeze temperature limit is not defined. Foodoil SC 01 must not be stored in galvanized tanks or pass through galvanized pipes, otherwise insoluble zinc glycols (zinc sludge) may form.

Physical/chemical data:

Colour hue:	Colourless	
Density at 20°C:	1.05 g/cm ³	ASTM D 1120
Viscosity at 20°C:	>7mm ² /s	
Refraction at 20°C:	1.433 n	ASTM D 1218
Boiling point:	164°C	ASTM D 1121
Flashpoint:	100°C	DIN EN ISO 2719
pH-value :	9.9	ASTM D 1287

Safety and environmental aspects:

ADR/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:	Weakly water hazardous (WGK 1)
EC-waste code:	16 01 15
CH-waste code:	identical to EC waste code (as per VeVA of 01.01.06)
Classification and labelling:	Stated in the safety data sheet



Container sizes: Canister: 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. 39.576 E (0324)