



Transcal N

Heat Transfer Oil

Description

Transcal N is a heat transfer oil produced from high quality mineral oils, possessing low vapour pressure and selected for high levels of thermal stability, specific heat and thermal conductivity. These properties ensure long

service life and excellent heat transfer properties. Its selected low viscosity characteristics ensure good circulation from cold start-up with reduced risk of local overheating.

Applications

Transcal N is recommended for non-pressurised, closed liquid-phase heating systems operating at bulk fluid temperatures up to 320 °C, and a maximum film temperature of 340°C.

Such systems are used widely in the food, construction, plastics, timber and metal industries, furthermore in laundries, on ships and where waste heat is extracted from flue gases.

Before being commissioned, the system should be pressure tested for leaks and then thoroughly flushed with Transcal N. Water should never be used.

Having been flushed and drained, the system should be filled with fresh Transcal N.

Filling is complete when the oil level in the expansion chamber is at 30-45 % of the level expected at operating temperature. All air must be evacuated from the system before temperature is raised to operation level.

Since mineral oils expand when heated, an expansion chamber must be incorporated in the system. This is the only location where the oil is likely to be in contact with the atmosphere.

Despite the excellent oxidation stability of Transcal N, various precautions must be taken to minimise exposure to air, especially if the temperatures of the fluid in the expansion chamber exceed 50 °C. A floating cover can be used, or the oil can be blanketed with inert gas.

Main Benefits

- Excellent heat transfer properties and performance
- Good pumpability, for ease of circulation and maintenance of bulk fluid temperature
- Maintains necessary viscosity at running temperatures to minimise the likelihood of pump cavitation and wear
- Long service life

Storage

All packages should be stored under cover to avoid the possible ingress of water and the obliteration of drum

markings. Products should not be stored above 60° C.

Health, Safety and Environment

Health, safety and environmental information is provided for this product in the relevant Materials Safety Data Sheet, which can be obtained by contacting the BP Lubricants and Fuels Technical Helpline on 1300 139 700. BP Australia, or its subsidiaries

will not accept liability if the product is used other than in the manner or with the precautions or for the purpose/s specified. Before the product is used other than as directed, advice should be obtained from the local BP office or Lubricants and Fuels Technical Helpline.

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Typical Characteristics

Grade:	Transcal N			
Mnemonic:	TCALN			
Product Code:	230339			
	Test Method	Units		
Density at 15°C	ASTM D1298	kg/L	0.875	
Flash Point (PMC)	ASTM D93	°C	210	
Flash Point (COC)	ASTM D92	°C	221	
Fire Point	ASTM D92	°C	243	
Autogenous Ignition temp.	ASTM D2155	°C	350	
Kinematic viscosity				
@ 40 °C	ASTM D455	cSt	31	
@ 100 °C	ASTM D455	cSt	5.2	
Pour point	ASTM D97	°C	-12	
Neutralisation Value	ASTM D974	mgKOH/g	<0.05	
Ramsbottom Carbon	ASTM D524	%wt	<0.05	

Coefficient of Thermal			0.00077	
Expansion (per °C)				
Normal Operating Temperature Range of Bulk Oil		°C	-10 to 320	

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

Note : The terms 'Flash Point' and 'Fire Point' in the typical characteristics table are purely technical names covering specific tests : they are not directly related to any hazard from spontaneous combustion or explosion. In a heat-transfer system it is quite normal for the oil temperature to be higher than its flash and fire point.

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