



Perfecto™ HT 2

Low temperature heat transfer fluid

Description

Perfecto™ HT 2 (previously called Transcal LT) is a high quality mineral oil combining low vapour pressure and high levels of thermal stability, specific heat and thermal conductivity with exceptional low temperature fluidity.

Application

Perfecto HT 2 is recommended primarily for non-pressurized closed liquid phase heating systems that incorporate both heating and cooling branches (eg: where an exothermic or heat releasing reaction takes place). The low temperature fluidity ensures that adequate circulation occurs in the coolest parts of the circuit. The maximum recommended bulk fluid temperature for Perfecto HT 2 is 250°C, and the fluid also operates effectively in cooling systems down to bulk temperatures of 30°C. Before being commissioned, the system should be pressure tested for leaks and then thoroughly flushed with Perfecto HT 2. Water should never be used.

With the system flushed and drained, it should be filled with fresh Perfecto HT 2. All air must be completely vented from the system before full temperature is imposed. For maximum efficiency, the heat transfer fluid should be circulated in conditions of turbulent flow. Care must be taken to ensure that bulk fluid temperature does not exceed 250°C, as this could lead to degradation of the oil. Despite the excellent oxidation stability of Perfecto HT 2 various precautions must be taken to minimize exposure to air, especially if the temperature of the fluid in the expansion chamber exceeds 50°C. A floating cover can be provided or the oil can be blanketed with inert gas.

Perfecto HT 2, because of its low viscosity and freedom from additives, can also be used as the sealing medium in oil film barrier seals on rotating equipment such as gas compressors and main oil line pumps. Perfecto HT 2 has excellent low temperature properties and high temperature stability in order to give good performance over a wide range of conditions and to maximise seal life.

Advantages

- Excellent heat transfer properties which can be maintained over long periods of time.
- Suitability for systems incorporating both heating and cooling branches.

Typical Characteristics

Name	Method	Units	HT 2
Density @ 15°C	ASTM D1298 / ISO 3675	g/ml	0.87
Flash Point (PMCC)	ASTM D93 / ISO 2719	°C	140
Flash Point (COC)	ASTM D92 / ISO 2592	°C	152
Kinematic Viscosity @ 40°C	ASTM D445 / ISO 3105	mm ² /s	8.2
Kinematic Viscosity @ 100°C	ASTM D445 / ISO 3105	mm ² /s	2.2
Pour Point	ASTM D97 / ISO 3016	°C	-39
Autogenous-Ignition Temperature	ASTM D2155	°C	310
Neutralization Value	ASTM D974	mg KOH / g	<0.05
Ramsbottom Carbon Residue	ASTM D524 / ISO 4262	% wt	<0.05
Coefficient of Thermal Expansion	-	per °C	0.00077
Normal Operating Range of Bulk Temperatures	-	°C	-30 to 250
Specific Heat @ 0°C	-	kcal / Kg °C	0.45
Specific Heat @ 250°C	-	kcal / Kg °C	0.65
Thermal Conductivity @ 0°C	-	Wt / m °C	0.118
Thermal Conductivity @ 250°C	-	Wt / m °C	0.102
Vapour Pressure @ 245°C	-	10 ³ Pa	10

Subject to usual manufacturing tolerances.

This product was previously called Transcal LT. The name was changed in 2015.

Perfecto™ HT 2

07 Apr 2015

Castrol, the Castrol logo and related marks are trademarks of Castrol Limited, used under licence.

This data sheet and the information it contains is believed to be accurate as of the date of printing. However, no warranty or representation, express or implied, is made as to its accuracy or completeness. Data provided is based on standard tests under laboratory conditions and is given as a guide only. Users are advised to ensure that they refer to the latest version of this data sheet. It is the responsibility of the user to evaluate and use products safely, to assess suitability for the intended application and to comply with all applicable laws and regulations. Material Safety Data Sheets are available for all our products and should be consulted for appropriate information regarding storage, safe handling, and disposal of the product. No responsibility is taken by either BP plc or its subsidiaries for any damage or injury resulting from abnormal use of the material, from any failure to adhere to recommendations, or from hazards inherent in the nature of the material. All products, services and information supplied are provided under our standard conditions of sale. You should consult our local representative if you require any further information.

Castrol Industrial, Technology Centre, Whitchurch Hill, Pangbourne, Reading, RG8 7QR, United Kingdom

www.castrol.com/industrial