



globaltherm®

RP

DIARYL ALKYL COMPOSITION FLUID  
For use in a variety of Industrial Process Applications

PRODUCT INFORMATION

Globaltherm® RP is a high temperature diaryl alkyl thermal fluid with a high flashpoint and delivers excellent thermal stability at the maximum use temperature.

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name**

Globaltherm® RP  
Heat transfer fluid

**Company Information**

Globaltherm, Cold Meece  
Estate, Cold Meece, Stone,  
Stafford, ST15 0SP, UK

**Emergency telephone**

+44 (0) 1785 760555

**Web**

www.globaltherm.org

**2. PRODUCT DESCRIPTION**

Globaltherm® RP is a diaryl alkyl composition intended for use in applications that require liquid phase heat transfer.

Globaltherm® RP fluid can be used in non-pressurized systems, and is pumpable to 0°C (32°F).

Globaltherm® RP can be used in non-pressurized, liquid phase systems and has good low temperature properties, reducing the need for heat tracing.

Globaltherm® RP has a high flash point at 194°C (381°F) and delivers excellent thermal stability at the maximum use temperature.

Globaltherm® RP degrades primarily to low molecular weight products, therefore negating build-up of high molecular weight products that must be removed from the system.

Globaltherm® RP has a toxicity that is extremely low.

Used fluid may be disposed of through several environmentally acceptable methods, such as used oil recycling or heavy fuels burning. Talk to us about our all-inclusive used oil reprocessing services.

NOTE: When draining hot fluid after flushing, normal safety



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precautions should be taken to prevent burns and the risk of fire.

### 3. APPLICATIONS

Globaltherm® RP Heat transfer fluid is a heat transfer agent suitable for applications requiring single fluid heating and cooling including; oil and gas, heat recovery, plastics, polymers and styrene and chemical processing.

Globaltherm® RP Heat transfer fluid is recommended for use in a temperature range up to a maximum bulk temperature of 660°F (350°C) and a maximum film temperature of 710°F (375°C).

### 4. SERVICE CONSIDERATIONS

As with any heat transfer oil, certain precautions should be taken to ensure satisfactory performance of Globaltherm® RP Heat transfer fluid in service:

- Before full temperature is imposed, all air and water should be completely vented;
- Hot oil is rapidly oxidised by air, causing thickening and deposit formation. At places where the oil is in contact with the atmosphere (e.g., the expansion vessel) the oil should not exceed 60°C for prolonged times or the oil needs to be blanketed with inert gas. Copper and its alloys promote rapid oil degradation in the presence of air and need to be avoided at these places; and,
- Hot oil circulating pumps must be checked frequently to prevent air from entering.

An analytical routine check of the heat transfer medium, while it is hot and circulating, should be part of the routine maintenance plan. This check should be carried out at least once a year, preferably three to four times a year. Testing can be carried out by Global Heat Transfer - via the Thermocare® lifecycle management programme - to all users of Globaltherm® Heat transfer fluids. The thermal fluid parameters which are measured will allow our experts an accurate assessment of the condition of the fluid. This way, Thermocare® testing and analysis programmes ensure prolonged and trouble-free operation of the fluid. Changes to the condition of the fluid are quickly detected and managed with Thermocare® and can be avoided in time before more extensive damage (to both system and fluid) and further costs are incurred.

Phone: +44 (0) 1785 760555; fax: +44 (0) 1785 760444 to ask about Thermocare® preventative maintenance programmes and heat transfer fluid testing and analysis.

### 5. COMPATIBILITY

Adding Globaltherm® RP Heat transfer fluid as a top-up to used fluids may help to increase fluid life. Laboratory testing is recommended before topping-up the system with this product. Global Heat Transfer can assist with lab testing. Please contact our technical team on +44 (0) 1785 760555 for more information.

### 6. HEALTH AND SAFETY

Globaltherm® RP Heat transfer fluid presents no hazard to health or safety under good standards of industrial and personal hygiene. Full details of health and medical procedures are contained in the Material Safety Data Sheet. Please contact our technical team on +44 (0) 1785 760555 for more information.

## 7. PHYSICAL AND CHEMICAL PROPERTIES

Parameter	Unit	Code (ASTM/ISO)	Result
Appearance	N/A	N/A	Clear, colourless liquid.
Operating Range	°C. (°F)	N/A	-20 to 350°C (-4 to 660°F)
Density @ 25 °C	kg/m <sup>3</sup>	ASTM 1298	1025.8
Kin. Viscosity 40°C	mm <sup>2</sup> /s (cSt)	NTR	14.92
Kin. Viscosity 100°C	mm <sup>2</sup> /s (cSt)	NTR	2.77
Flash Point	°C	ASTM D93	194
Fire Point	°C	ASTM D92	206
Auto ignition Point	°C	ASTM E659	385
Melt Point	°C	ASTM D97	-34
Maximum Bulk Temperature	°C	NTR	350
Maximum Film Temperature	°C	NTR	375
Boiling Point	°C	NTR	353
Average Molecular Weight	NTR	NTR	236.4
Operating Range	°C. (°F)	N/A	-20 to 350°C (-4 to 660°F)
Appearance	N/A	N/A	Clear, colourless liquid.
Density @ 25 °C	kg/m <sup>3</sup>	ASTM 1298	1025.8

*Note: The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This edition supersedes all previous editions and information contained within them. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product. Abbreviations: OC, open cup test; COC, Cleveland open cup test; and, NTR, no test reported.*

## 8. OTHER INFORMATION

PI Creation Date June 2017 (#1) Revision date NA



**THERMOCARE® IS THE AWARD WINNING**  
24/7 REAL-TIME CONDITION MONITORING AND  
MANAGEMENT SYSTEM FOR HEAT TRANSFER FLUID



thermocare®

**PREVENTATIVE MAINTENANCE FOR COST,  
RISK AND PERFORMANCE OPTIMISATION**

Thermocare® will also extend the life of your thermal fluid and reduce your environmental impact.

It's all you need to stay safe, reduce costs and improve productivity for a straightforward fixed cost.

And, what's more we have over 25 years' experience in thermal fluid management so you couldn't be in better hands.

**GET IN TOUCH**

GLOBALTHERM®, Cold Meece Estate, Cold Meece, Stone, Stafford, ST15 OSP, UK

**Call** +44 (0) 1785 760555 **Freephone UK** 0800 298 0488

**Email** [enquiries@globaltherm.org](mailto:enquiries@globaltherm.org) **Find out more** [www.globaltherm.org](http://www.globaltherm.org)

