



## 76 Heat Transfer Oil 21

76 Lubricants Heat Transfer Oil 21 is a highly refined mineral oil developed for use in closed liquid-phase heat transfer systems equipped with expansion tanks, pressure relief valves and nitrogen blanketing.

Heat Transfer Oil 21 is available in one intermediate viscosity grade: ISO 32/46. It is formulated with hydroprocessed paraffinic base oils that have good thermal stability and low sludge-forming tendency for long service life. For best performance, the maximum bulk oil temperature should not exceed 600°F (315°C).

### ***Applications***

- Heat transfer medium for industrial manufacturing processes
- Heat transfer equipment used in the manufacture of asphalt shingles and roofing compounds
- Heat transfer equipment used in the manufacture of resins and coatings
- Road-paving equipment with closed systems where the manufacturer calls for a straight mineral oil

### ***Features/Benefits***

- Excellent performance in closed systems with nitrogen purge
- Long service life
- Resists thermal degradation
- Noncorrosive

**Heat Transfer Oil  
For Closed Systems**

**Customer Service  
Number:  
1-888-766-7676**

**Technical Hot Line:  
1-800-435-7761**

**E-mail Address:  
*76lubricants@  
conocophillips.com***

***www.76Lubricants.com***

**600 N. Dairy Ashford • 2W9000 • Houston, TX 77079**



## 76 Heat Transfer Oil 21

### Typical Properties

<b>ISO Grade</b>	<b>32/46</b>
Density, g/cm <sup>3</sup> @ 15.6°C (60°F)	0.865
Density, lbs/gal @ 15.6°C (60°F)	7.20
Color, ASTM D1500	0.5
Flash Point (COC), °C (°F)	222 (432)
Pour Point, °C (°F)	-15 (5)
Viscosity,	
cSt @ 40°C	39.9
cSt @ 100°C	6.4
SUS @ 100°F	205
SUS @ 210°F	47.7
Viscosity Index	110
Acid Number, ASTM D974, mg KOH/g	0.02
Carbon Residue, ASTM D524, wt %	0.04
Copper Corrosion, ASTM D130	1a

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### Physical Properties of 76 Heat Transfer Oil 21

Temp °C	Temp °F	Specific Gravity	Density, lbs/gal	Density, lbs/ft <sup>3</sup>	Viscosity, cSt	Viscosity, cP	Viscosity, lbs/ft-hr	Specific Heat, Btu/lb-°F	Thermal Conductivity, Btu/hr-ft <sup>2</sup> -°F	Vapor Press., mm Hg	Vapor Press., psia
-20	-4	0.885	7.37	55.21	3,030	2,682	6,489	0.416	0.9500	0	0
0	32	0.874	7.28	54.48	438	383	926	0.433	0.9399	0	0
20	68	0.862	7.18	53.75	110	95	229	0.450	0.9297	0	0
40	100	0.851	7.09	53.03	39.9	34.0	82.2	0.468	0.9207	0.00005	0
60	140	0.839	6.99	52.33	18.6	15.6	37.8	0.485	0.9094	0.00020	0
80	176	0.828	6.89	51.63	10.3	8.5	20.6	0.502	0.8993	0.00096	1.849E-05
100	212	0.817	6.80	50.94	6.40	5.2	12.7	0.520	0.8891	0.00415	8.027E-05
120	248	0.806	6.71	50.26	4.36	3.5	8.50	0.537	0.8790	0.01176	2.274E-04
140	284	0.795	6.62	49.59	3.17	2.5	6.10	0.555	0.8688	0.065	1.261E-03
160	320	0.785	6.54	48.92	2.43	1.9	4.62	0.572	0.8587	0.32	6.182E-03
180	356	0.774	6.44	48.27	1.93	1.49	3.62	0.590	0.8485	0.96	1.856E-02
200	392	0.764	6.36	47.62	1.58	1.21	2.92	0.607	0.8384	2.1	4.061E-02
220	428	0.754	6.28	46.98	1.33	1.00	2.43	0.624	0.8282	4.5	8.702E-02
240	464	0.743	6.19	46.35	1.14	0.85	2.05	0.642	0.8181	15.0	2.901E-01
260	500	0.733	6.10	45.73	0.988	0.72	1.75	0.659	0.8079	30.0	5.801E-01
280	536	0.724	6.03	45.12	0.868	0.63	1.52	0.677	0.7978	54.0	1.044E+00
300	572	0.714	5.94	44.52	0.770	0.55	1.33	0.694	0.7876	95.0	1.837E+00
320	608	0.704	5.86	43.92	0.689	0.49	1.17	0.712	0.7775	195	3.771E+00

### Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

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