

# Addotherm™ K-A

## Synthetic Heat Transfer Fluid

### Product Description

Addotherm™ K-A is a versatile heat transfer fluid an eutectic mixture of two biphenyl (C<sub>12</sub>H<sub>10</sub>) and diphenyl oxide (C<sub>12</sub>H<sub>10</sub>O), which are very stable aromatic chemicals. This can be conveniently used either in liquid phase or vapor phase as an effective heat transfer agent at a wide range of temperatures from 15°C to 400°C. In vapor phase it can be used up to a pressure of 10.6 bar.

### Features and Benefits

- **Performance** – Addotherm™ K-A can deliver many years of reliable, trouble-free operation, even when operating continuously at the recommended maximum temperature.
- **Excellent Thermal Properties** – Provides uniform heating and precise temperature control.

### Recommended use Temperature Range

15°C to 400°C.

### Applications

Addotherm™ K-A vapor phase systems provide higher heat per unit mass. Provides uniform heat source and precise temperature control to the user. No pumps are needed when a gravity return condensate system is used.

### Typical Properties

	Test Method	Unit	
<b>Appearance</b>	Visual		Clear pale yellow Liquid
<b>Composition</b>			Biphenyl/Diphenyl Oxide
<b>KV @ 40°C</b>	ASTM D 445	mm <sup>2</sup> /S	2.5
<b>KV @ 100°C</b>	ASTM D 445	mm <sup>2</sup> /S	0.986
<b>Bulk Temperature</b>	ASTM D6743	°C	400
<b>Maximum Film Temperature</b>	ASTM D6743	°C	430
<b>Flash Point COC</b>	ASTM D 92	°C	113
<b>Auto ignition Temperature</b>	ASTM D 92	°C	> 599
<b>Pour Point</b>	ASTM D 97	°C	12
<b>Vapor Pressure @ 300°C</b>	ASTM D 2879	kPa	239
<b>Vapor Pressure @ 350°C</b>	ASTM D 2879	kPa	548

<b>Vapor Pressure @ 400°C</b>	ASTM D 2879	kPa	1090
<b>Thermal Conductivity @ 300°C</b>	ASTM D 2717	W/(m.K)	0.096
<b>Thermal Conductivity @ 350°C</b>	ASTM D 2717	W/(m.K)	0.086
<b>Thermal Conductivity @ 400°C</b>	ASTM D 2717	W/(m.K)	0.076
<b>Specific Heat @ 300°C</b>	ASTM D 2766	kJ/KgK	2.314
<b>Specific Heat @ 350°C</b>	ASTM D 2766	kJ/KgK	2.454
<b>Specific Heat @ 400°C</b>	ASTM D 2766	kJ/KgK	2.628
<b>Initial Boiling Point</b>	ASTM D 2887	°C	257
<b>Chlorine Content</b>	DIN 51577-3	ppm	< 10
<b>TAN</b>	ASTM D664	mg KOH/g	< 0.2
<b>Moisture Content</b>	ASTM D6304	ppm	< 300
<b>Density @ 15°C</b>		Kg/m <sup>3</sup>	1068
<b>Copper corrosion</b>	ASTM D130		<< 1a

### Fluid Condition Monitoring Program

It is important to monitor oil conditions regularly as rates of change in physical characteristics are more significant than actual values. Addotherm™ K-A also additionally provides free\* fluid condition monitoring program, where the samples from the systems are collected, analyzed and reports are shared for corrections / improvements in the system, ensuring higher efficiency.

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