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DelcoTerm® M 32

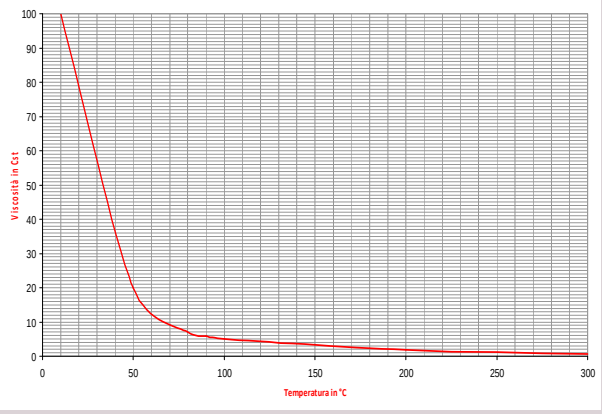
THE PERFECT HEAT TRANSFER FLUID

The fluid **DelcoTerm® M32** is a mineral oil, paraffinic based, selected, refined and treated with procedures that improve its physical-chemical characteristics. It is really suitable to be used as an heat transfer fluid in oleothermal plants (liquid phase only). It's an oil with a narrow range of distillation of pale straw-color, low grade of toxicity for inhalation and ingestion, with a really low vapor pressure. It has an easy and safe handling, a good demulsibility, solubility in water and chemical-physical characteristics able to satisfy all the requirements for a diathermic mineral oil.

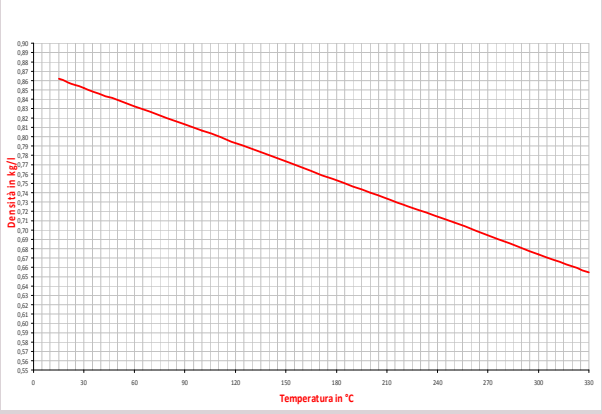
The **DelcoTerm® M32** oil has got high distillation temperature (2%), and flammability, low vapor pressure, absolute chemical inertness against all material used in the oleothermal circuits and a good low temperature pumpability that put it in the forefront of best heat transfer fluids in the market. It has great chemical and thermal stability, and for this reason it is really resistant to all kinds of classical deterioration processes that an heat transfer fluid face in oleothermic circuits e.g. **Oxidation** and **Cracking**.

The **DelcoTerm® M32** oil has a really long durability, practically unlimited if it is adequately protected from the oxygen present in the air, if it is used in the range of temperature prescribed and if it is controlled with a good maintenance plan. There are cases of well-run charges in plants subjected to the program of ***" D.E.L.CO. preventive and planned maintenance"*** that have already passed 35+40 years without the physical-chemical characteristics of oil have undergone significant changes or such as to make it non-more suitable to function as a fluid heat exchanger. The following diagrams show the state of the main thermodynamic parameters in function of the change of temperature, while the final table shows the most important physical-chemical characteristics.

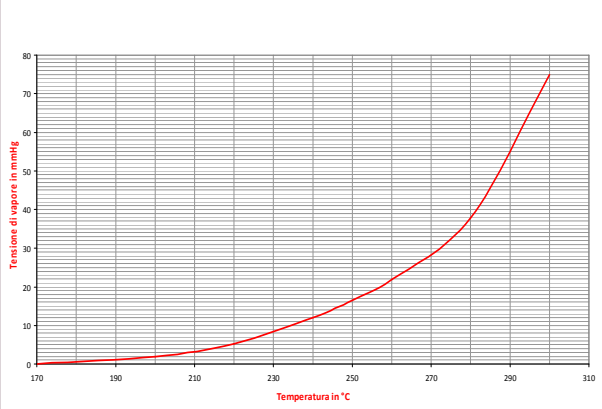
VISCOSITY VS TEMPERATURE



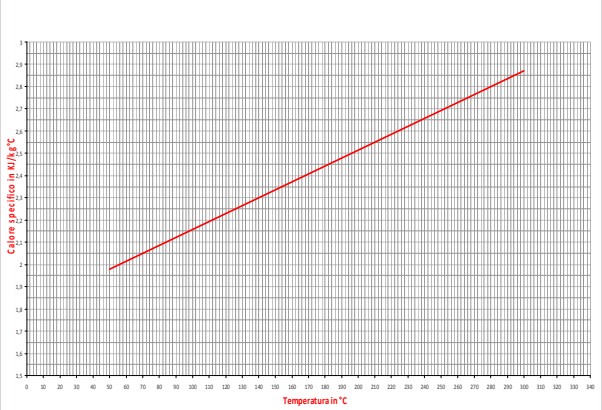
DENSITY VS TEMPERATURE



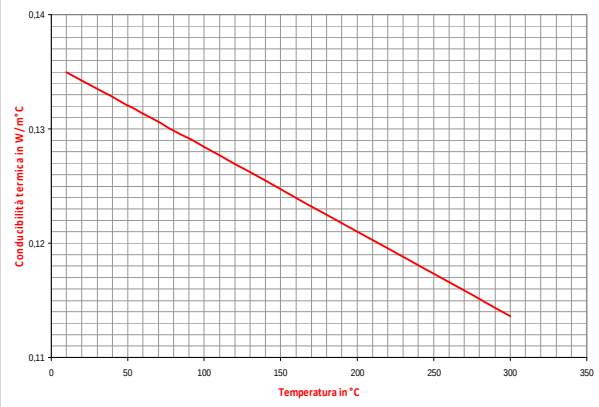
VAPOUR PRESSURE VS TEMPERATURE



SPECIFIC HEAT VS TEMPERATURE



THERMAL CONDUCTIVITY VS TEMPERATURE



Properties	*Unit of Measure*	*Typical values*
Max operating temperature	**°C**	**300**
Appearance	-	Clear
Colour	N°	0,5
Density at 15°C	kg/lt	0,864
Coefficient of cubic expansion	1/C°	0,0007
Kinematic viscosity	cSt	32
Viscosity index	-	110
Pour point	°C	-12
Flash point in closed vessel (PM)	°C	210
Flash point in open vessel (COC)	°C	224
Autoignition temperature	°C	335
Distillation temperature (2%) to 760 mmHg	°C	≤300
Tolerable film temperature	°C	≤335
Carbon residue Conradson	% in weight	<0.05
Neutralization number	mgKOH/g	<0,03
Aromatic carbon	%moli	3,5
Sulfur content	% in weight	<0,1
Aniline point	°C	112
Refraction index	-	1,4740
Chlorine and PBC	ppm	<1
Aromatic polycyclic hydrocarbons	ppm	<1
Aromatic polynuclears	ppm	<1

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