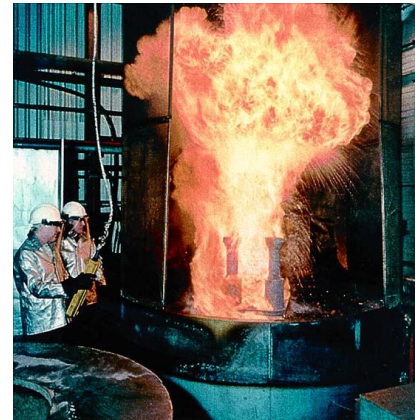


High performance European product range

Houghton's European high performance quenching oils offer a range of quenching speeds and operating temperatures to suit your specific heat treatment requirements. Each product is specially formulated using premium quality base stocks, 'best in class' additives including antioxidants and where applicable fast-quench additives to provide consistent, optimum hardness and mechanical properties in quenched components, together with long product life under the most arduous of operating conditions .



HOUGHTO-QUENCH 100 SERIES

The Houghto-Quench 100 Series are a range of high performance cold quenching oils with increasing quenching speed eg. normal, medium, accelerated and highly accelerated designed to suit your specific heat treatment requirements. They have a maximum recommended operating temperature of up to 100°C and are used in applications where distortion is not a major problem and component staining is undesirable.

MAR-TEMP 200 SERIES

The Mar-Temp 200 Series are high performance warm quenching oils available with either normal or accelerated quenching speeds. They are specifically designed for use at temperatures up to 120°C in open tanks and up to 150°C in Sealed Quench Furnaces. In application they provide satisfactory distortion control together with maximum economy and long life during use.

MAR-TEMP 300 SERIES

The Mar-Temp 300 Series are hot quenching oils specifically designed for use at temperatures up to 200°C in applications where distortion must be minimised. They are available with normal and accelerated quenching speeds and find particular application in continuous and sealed quench furnaces for the control of distortion on critical high precision components such as bearing rings or automotive transmission parts in both through hardened and carburised steels.

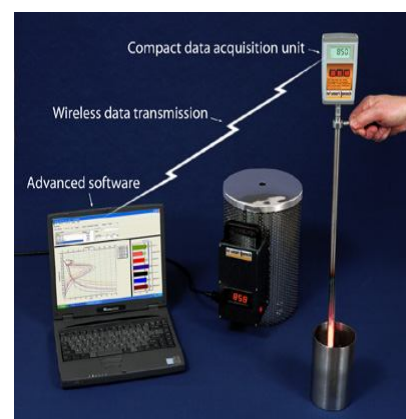
KLEN-QUENCH / KLEN-TEMP SERIES

Many of the Houghto-Quench and Mar-Temp products are also available in the waterwashable form as Klen-Quench or Klen-Temp grades. These enable the oil to be washed off in plain cold water directly after quenching eliminating the need for costly water based wash chemicals or undesirable solvent based cleaners and without adversely affecting the quenching characteristics.

Upon request, individual product data sheets are readily available for all the Houghto-Quench /Klen-Quench and Mar-Temp / Klen-Temp products.

IVF SMARTQUENCH

Of all the tests carried out on a quenching fluid - its quenching characteristics/performance remain the most critical parameter. These can be easily and regularly monitored 'on site' using the portable IVF Smartquench. For further details or a demonstration of the IVF Smartquench capabilities then please do not hesitate to contact us.



Houghto-Quench 100 Series - high performance cold quenching oils

Product	Typical physical properties			Application
	Quenching Speed	Kinematic Visc @ 40°C	Flash Point °C	
Houghto-Quench 100	Normal	23cSt	200	Comprehensive range of high performance cold quenching oils of varying speed to suit specific requirements, specifically designed for applications requiring clean, stain free components together with long life when subjected to the most arduous of operating conditions. Several products are also available in the water washable form as Klen-Quench grades enabling simple wash-off in plain cold water after quenching. Cold quenching oils are generally used in applications where distortion is not a major problem - across the range applications include the quenching of tool steels and high hardenability alloy steels with the normal speed oils through to very low hardenability steels with the fully accelerated oils.
Klen-Quench 100	Normal	23cSt	200	
Houghto-Quench 120	Medium	24cSt	200	
Klen-Quench 120	Medium	24cSt	200	
Houghto-Quench 140	Accelerated	32cSt	200	
Klen-Quench 140	Accelerated	32cSt	200	
Houghto-Quench 150	Accelerated	27cSt	200	
Houghto-Quench 160	Fully accelerated	30cSt	200	
Houghto-Quench 170	Fully accelerated	14cSt	180	

Mar-Temp 200 Series - high performance warm quenching oils

Product	Typical physical properties			Application
	Quenching Speed	Kinematic Visc @ 40°C	Flash Point °C	
Mar-Temp 220	Normal	60cSt	240	High performance warm quenching oils with normal and accelerated speeds also available in the water washable form as Klen-Temp grades enabling simple wash-off in plain cold water. At this time of escalating energy/fuel costs these provide an economical alternative to hot quenching oils for distortion prone components.
Klen-Temp 220	Normal	60cSt	240	
Mar-Temp 240	Accelerated	85cSt	240	
Klen-Temp 240	Accelerated	85c St	240	

Mar-Temp 300 Series - high performance hot quenching oils

Product	Typical physical properties			Application
	Quenching Speed	Kinematic Visc @ 40°C	Flash Point °C	
Mar-Temp 300	Normal	500cSt	300	Hot quenching oil range offering either normal or accelerated quenching characteristics - specifically designed for applications where distortion must be minimised. They find particular application at temperatures of up to 200°C in SQ and continuous furnaces for the control of distortion on critical high precision components such as bearing rings or automotive transmission parts in through hardened, carburised and carbo-nitrided steels.
Klen-Temp 300	Normal	500cSt	300	
Mar-Temp 340	Accelerated	110cSt	250	

