

QUENCHING FLUIDS

Particularly in the field of heat treatment, fluids play a central role. Only if the optimum quenchant is selected, can the required microstructure and strength be achieved.

Any change to the quenching rate has an effect on the microstructure, on the properties of the material and thus on its later use.

Apart from the selection of the right quenchant, precise control over the corresponding process parameters is crucial for optimum heat treatment results. Only the perfect matching of all the hardening process parameters can guarantee consistent and warp-free heat treatment results.

Trust a partner who understands all the facets of heat treatment, who is glad to advise you and who can offer you the very best system solutions for perfect results.



Quenching Fluids

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Quenching Fluids

Product name	Kin. Visc. at 40 °C [mm ² /s]	Density at 15 °C [g/ml]	Flash-point [°C]	Temperature range bath temperature [°C]	Main application area
Bright Hardening Oils					
THERMISOL QB 32	31	0.87	231	50 – 90	Heat treatment of alloyed tool steels as well as case-hardening steels, which can be considered due to their hardenability. Mainly used in open systems.
THERMISOL QB 46	46	0.87	220	50 – 100	
High-performance Hardening Oils based on Mineral Oil					
THERMISOL QH 10	12	0.85	178	50 – 80	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels (screws and bolts, springs, chains, assembly tools, gear parts, ball bearings). Mainly used in open systems.
THERMISOL QH 25	21	0.86	196	50 – 100	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels. For open and closed systems.
THERMISOL QH 40	45	0.87	234	50 – 110 (max. 150)	Hardening of tool steels and high-alloyed heat-treatable steels. Suitable for open and closed systems.
THERMISOL QH 55	51	0.87	232	50 – 110 (max. 150)	
High-performance Hardening Oils based on Hydrocrack Oil					
THERMISOL QH 10 MC	11	0.84	172	50 – 80	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels (screws and bolts, springs, chains, assembly tools, gear parts, ball bearings). Mainly used in open systems.
THERMISOL QH 30 MC	26	0.84	220	50 – 100 (max. 150)	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels. Can be used in open and closed systems for continuous processes.
THERMISOL QH 35 MC	37	0.85	236	40 – 100 (max. 150)	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels. Can be used in open and closed plants, for batches and continuous processes.
High-performance Hot Bath Hardening Oils or Tempering Oils					
THERMISOL QH 120	119	0.89	256	50 – 170 (max. 200)	Hardening and tempering of tool steels and high-alloyed heat-treatable steels. Suitable for open and closed systems.
THERMISOL QWA 460	503	0.90	328	100 – 180 (max. 275)	
Synthetic High-performance Hardening Oils and High-performance Hot Bath Hardening Oils or Tempering Oils					
THERMISOL QHY 10	11	0.87	204	50 – 130	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels (screws and bolts, springs, chains, assembly tools, gear parts, ball bearings). Mainly used in open systems.
THERMISOL QHY 35	36	0.93	226	60 – 270	Hardening of unalloyed and alloyed case-hardening steels, heat-treatable steels and tool steels. Can be used in open and closed systems for continuous processes.
THERMISOL QHY 150	145	0.93	312	60 – 260	Hardening and tempering of tool steels and high-alloyed heat-treatable steels. Suitable for open and closed systems.

THERMISOL

Product name	Kin. Visc. at 40 °C [mm ² /s]	Density at 15 °C [g/ml]	pH value 10%	Factor Hand-held Refractometer	Main application area
Water-miscible Quenching Concentrates					
THERMISOL QZS 700	125	1.100	8.8	1.7	Especially suitable for quenching during induction and flame hardening. Hardening of low-alloyed forgings and unalloyed to low-alloyed materials possible. Especially for high corrosion protection requirements.
THERMISOL QZS 400	430	1.092	9.0	1.8	Especially suitable for quenching during induction and flame hardening. Hardening of low-alloyed forgings and unalloyed to high-alloyed materials possible. Particularly suitable for components sensitive to cracking.
THERMISOL QZS 400 WB	680	1.110	9.1	1.5	Especially suitable for quenching during induction and flame hardening. Hardening of low-alloyed forgings and unalloyed to high-alloyed materials possible. Particularly suitable for components sensitive to cracking. Contains no biocides and offers a particularly good dissolving capacity.
THERMISOL QZS 300 ALU	301	1.072	8.5	2.4	Especially suitable for the heat treatment of aluminium (aerospace). Meets the requirements of SAE AMS 3025 C (paragraph 3.2). Universally applicable for quenching materials in induction and flame hardening.
THERMISOL QZS 100 Plus A	1800	1.131	9.7	1.2	Hardening of low-alloyed forgings and of unalloyed to low-alloyed materials possible. Suitable for quenching during induction and flame hardening. Can be used as a substitute for low viscosity hardening oils.
THERMISOL QZS 150 MM	290	1.039	9.0	4.1	Hardening of low-alloyed forgings and unalloyed to high-alloyed materials possible. Particularly suitable for quenching large work-pieces in open baths. Can be used as a substitute for low viscosity hardening oils.
THERMISOL QZS 550 CPO	220	1.042	9.0	2.9	Hardening of high-alloyed forgings and of low-alloyed to high-alloyed materials possible. Particularly mild quenching processes can be achieved. Can be used as a substitute for higher viscosity hardening oils. Especially for high corrosion protection requirements.
THERMISOL QZS 550	510	1.047	9.3	4.0	Hardening of high-alloyed forgings and low-alloyed to high-alloyed materials possible. Particularly mild quenching processes can be achieved. Can be used as a substitute for higher viscosity hardening oils.