PRODUCT INFORMATION

FEROQUENCH WR

aqueous, synthetic quenchant with very slow quenching characteristics

1. General properties

FEROQUENCH WR -solutions are absolutely noncombustible and guarantee thereby safety for workers and equipment. Fire hazards and formation of unpleasent smoke or soot are avoided.

FEROQUENCH WR does not contain mineral oil or nitrite and no other hazardous materials.

Appearance	: fluid, yellow
Density at 20 ° C	: 1,14 g/cm^3
Viscosity at 20 ° C	: approx. 780 mm^2/s (cSt)
pH (5-15 % solution)	: 8,8-9,2

2. Quenching properties

Compared with water, FEROQUENCH WR shows an extremely reduced quenching rate in the liquid boiling and convection phase (see quenching curves) .

Due to these properties, FEROQUENCH WR offers new possibilities for the application of aqueous quenchants.
Extremely sensitive parts can resp. should be withdrawn from the FEROQUENCH WR-bath before cooling down completely to the bath-temperature. In this case no smoke and no unpleasent smell will bother the personnel.

FEROQUENCH WR-solutions are applied in practice between 6 - 30 % - mostly between 10 - 20%.. A higher concentration is possible, but usually not necessary.

3. Fluid temperatures

The quenching properties of water-based quenchants are much more influenced by the bath-temperature than those of oils.

Therefore the temperature does not only have to be controlled, but also to be maintained in

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a narrow range to guarantee constant cooling properties with best quenching results.

FEROQUENCH WR -solutions are mostly applied between 35° C - 50° C Higher temperatures are possible, - up to 60° C and even 70° C - to decrease the quenching speed even more - if requiered.

FEROQUENCH does not change its quenching properties suddenly (abrupt), neither at low fluid-temperatures nor at very high fluid temperatures. The variation of the cooling speed with the variation of the temperature is a continious process.

4. Concentration control

On the long term basis concentration control of FEROQUENCH WR-solutions has to be done by measuring the viscosity, because this is in good accordance to the contained effective polymer content , which create the slow quenching characteristic.

For measuring the concentration by viscosity an Ubbelohde-capillary-factor 0,1 is recommendable or another capillar-viscosimeter, which is suitable to measure a viscosity between 3 – 20 mm²/s (20°C) correctly, can be used.

In used FEROQUENCH WR bathes the »real« concentration can not be measured with the refractometer.

Salts from added water, other contaminants as well as - after a longer period of use - the formation of some thermal degradation products will influence the concentration obtained by refractometer.

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Only valid in combination with EU-Safety Data Sheet

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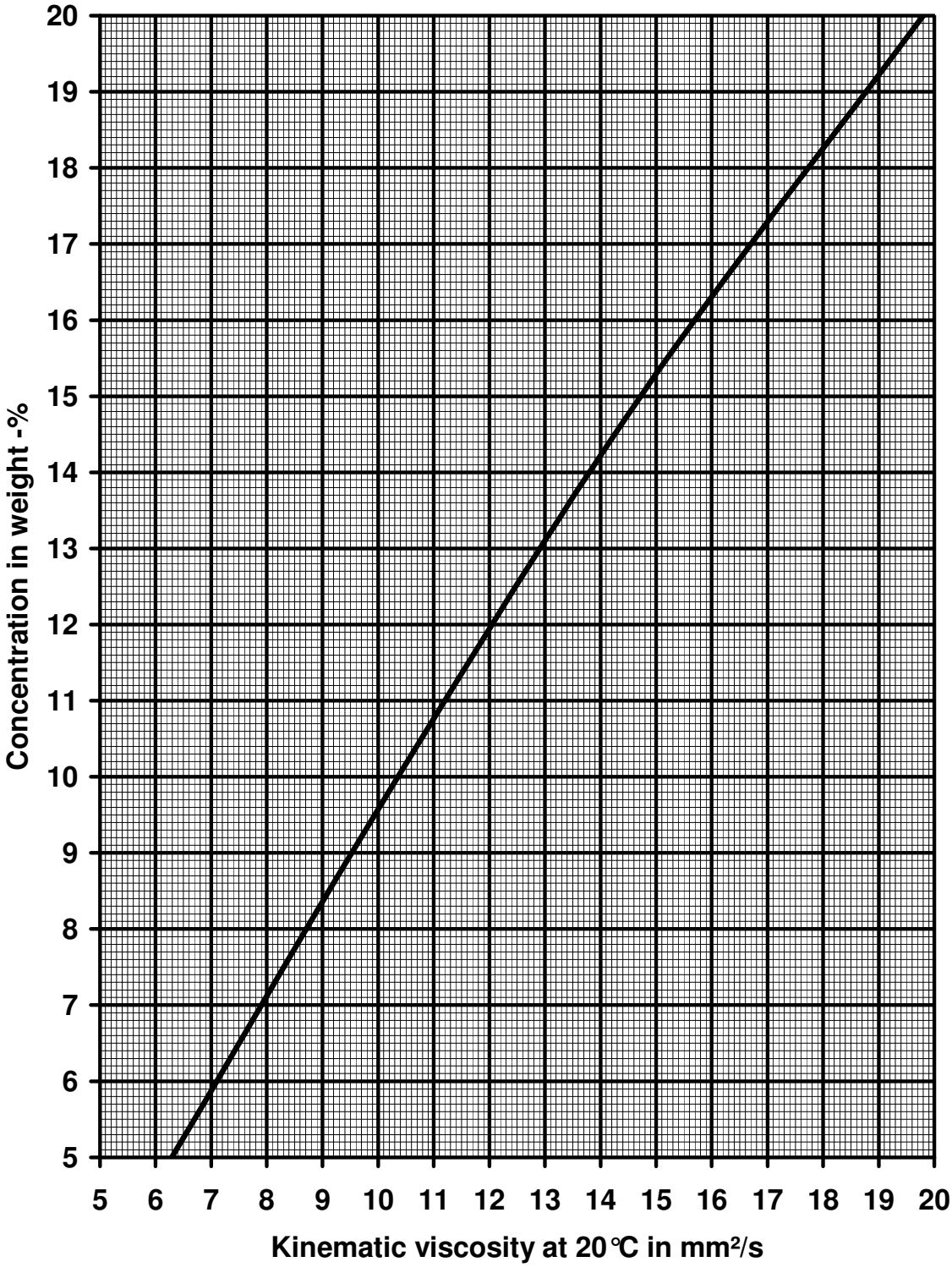
Concentration control by viscosity 03 01 1151022



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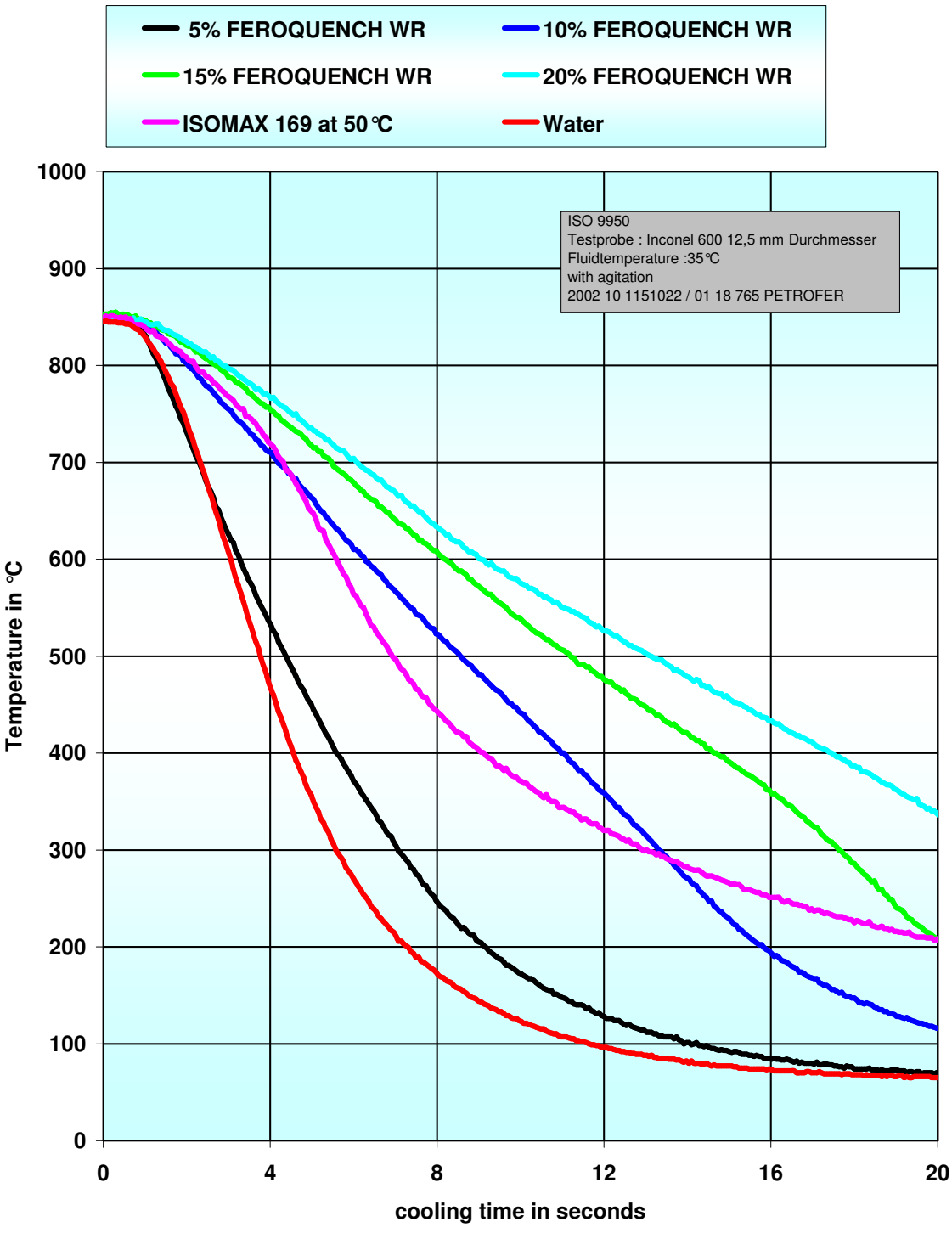
FEROQUENCH WR quenching properties



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