

## ISOMAX 169

High-speed, low-viscous quenching oil

### **Application:**

ISOMAX 169 is a high-speed quenching oil being universally applied for hardening of all kinds of workpieces made from lean-alloyed or plain carbon steels.

It is mostly applied in open quenching tanks, e.g. for bolts, nuts and screws, nails, washers etc. in continuous or belt-furnaces; for forged pieces – also heavy ones – quench directly after the forging process.

A wide application of ISOMAX 169 can also be found in the automotive industry for quenching pieces after carburization as gears, shafts, pins etc.

For workpieces with a big different ratio of surface/volume the application of ISORAPID quenching oil, which are even more stable against evaporation, is recommended in sealed furnaces with batch quenching.

ISOMAX 169 may also be used for the workpieces from all kinds of salt baths. ISOMAX 169 is also available as ISOMAX 169 E version, which contains surface-active ingredients and can easily be removed with pure water after quenching.

### **Chemical and physical data:**

Density at 20°C	0.850
Viscosity at 20°C	34.0mm <sup>2</sup> /s (cSt)
Viscosity at 40°C	16.0mm <sup>2</sup> /s (cSt)
Flash point	158°C
Fire point	188°C

### Quenching properties:

ISOMAX 169 is an extremely fast quenching oil with an excellent evaporation resistance referring to its low viscosity. Efficient additives provide a high cooling rate in the initial stage of quenching. This means a fast and uniform cooling of the

complete work surface by preventing the formation of stable oil-vapor pockets. The result is a high and uniform yield hardness and minimum distortion.

The cooling rate of ISOMAX 169 is also extremely high in the liquid convection stage. This provides deep hardness penetration.

#### Aging stability and service life:

ISOMAX 169 possesses an extraordinarily anti aging and oxidation stability and provides long service life.

#### Cleaning of work-pieces after quenching:

Due to its low viscosity, only a very small amount of ISOMAX 169 residue leave on the surface, if the next process is tempering with a high temperature the workpieces is no need to be cleaned. The burned residues in this tempering process will not generate any harmful matters. The workpieces which have to be cleaned after quenching may be washed in aqueous hot cleaners (e.g. FEROCLEAN N-SF) or solvents.

#### Control:

The recommended temperature range for ISOMAX 169 is 40 to 70°C. For a short period application, temperatures is allowed to reach 100°C. Bath temperatures below 30°C and over 100°C should be avoided.

Ps: Keep the oil always free from water!

#### Packing:

208L Steel Drum

Net Weight: 170 kg/Drum

Only valid in combination with EC-Safety-Data-Sheet.

#### Warranty

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