



Pilot® Base Oils for Metal Working & Lubrication

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Pilot® 200R / Pilot® 250H / Pilot® 261R / Pilot® 275H

Haltermann Carless' Pilot® Oils portfolio offers a variety of physical and compositional characteristics to enable key performance parameters to be achieved for the exacting and extreme industrial conditions in which we operate today.

Pilot® Oils are used in a large number of high-performance application areas including cutting oils, cutting emulsions, aluminium foil and sheet rolling, steel rolling, extrusion and forming oils, honing and grinding oils, quenching oils, EDM/spark erosion, hydraulic oils, spindle oils, textile oils and industrial cleaners.

Using a wide range of performance criteria, operators and formulators may select Pilot® Oil grades with a wide choice of priority characteristics, tailored to application and equipment.

Benefits of Pilot® Base Oils:

- High purity
- Defined boiling range and viscosity
- Excellent solvency (for additive formulations)
- Extremely low sulphur content
- PAH-free
- Low VOC options (2004/42/EC, Swiss Ordinance 814.018)
- Non-staining on metals
- UV stability

- Good viscosity index
- Excellent cold performance
- Chemically inert
- Excellent temperature and pressure performance
- FDA 178.362 B approval
- Low environmental impact
- Readily biodegradable

The deeply hydrotreated, low-aromatic Pilot® Oils support a safe working environment for operators. Pilot® Oils are produced in our state-of-the-art ISO 9001, ISO 14001 and ISO 50001 certified production facilities in Europe and are supplied to global markets in bulk or as packaged goods. Haltermann Carless industry-focused technical and development teams can assist with specific application queries.

Properties	Pilot® 200R	Pilot® 250H	Pilot® 261R	Pilot® 275H
Kin. Viscosity at 40 °C	1.9 mm²/s	2.5 mm ² /s	2.5 mm²/s	3.0 mm ² /s
Density at 15 °C	810 - 830 kg/m³			
Boiling Range – IBP	220 °C	235 °C	242 °C	250 °C
Boiling Range – FBP	243 °C	275 °C	272 °C	295 °C
Flash Point, min.	88 °C	100 °C	104 °C	110 °C
Pour Point, max.	-30 °C	-30 °C	-20 °C	-20 °C
Aromatics (UV)	max. 1000 ppm			
FDA 21 CFR	178.362 B			

 $\ \ \, \text{Listed Product data are typical values and may vary according to specification requirements.} \\$

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