



**Metal Working
and Lubrication**

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Pilot 261 / Pilot 291 / Pilot 321 / Pilot 200 / Pilot 400 / Pilot 600 / Pilot 900 / Pilot 1200 / Pilot 295SR / Pilot 140 / Pilot 150H

The Pilot® Oils product 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.

Our range includes products produced from a selection of feedstock and production routes, including hydro-isomerised (de-waxed), deeply hydrogenated and hydro-treated materials.

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, corrosion inhibitors, hydraulic oils, spindle oils, textile oils and industrial cleaners.

Using a wide range of performance criteria, operators and formulators may select Pilot® Oil grades which will help in achieving consistently high-end product performance, with a wide choice of priority characteristics, tailored to application and equipment:

- Defined boiling range and viscosity options
- Solvency options (for additive compatibility)
- Extremely low sulphur content
- PAH-free
- Non-VOC options (EC/1999/13)
- Chemical/thermal and oxidative stability
- Total life economics
- Improved operational effectiveness
- Non-staining
- UV stability
- Temperature gradient performance
- Low pour points/low temperature fluidity
- High purity
- Chemically inert
- Low vapour pressures
- Excellent temperature/pressure performance
- FDA and BfR options
- Blue Angel compliance
- Low environment impact
- Occupational hygiene and operator safety
- Low human and aquatic toxicity
- Readily biodegradable

HCS employs industry-focused technical and development teams which can assist with specific application queries.

Properties	Unit	Pilot 261	Pilot 291	Pilot 321	Pilot 295 SR	Pilot 140	Pilot 150H	Pilot 200	Pilot 400	Pilot 600	Pilot 900	Pilot 1200
Viscosity	mm ² s	2.32	3.7	3.9	3.0	4.32	4.4	1.9	4.3	6.0	8.5	12.0
Density @ 15°C	g/mL	0.818	0.819	0.820	0.818	0.816	0.816	0.815	0.830	0.850	0.860	0.820
Boiling Range	°C	236-272	256-305	275-320	256-296	260-330	260-320	210-250	275-320	285-335	314-340	275-465
Flash Point	°C	100	115	125	118	120	110	80	138	140	160	195
Pour Point	°C	-31	-16	-9	-34	-14	-14	-43	-36	-40	-39	-33
Aromatics Content	% volume	<0.3	<0.5	0.4	9	5.4	4.8	0.2	<0.4	<0.5	0.1	<0.1
FDA	178.362	C	B	C	C	C	C	B	B	B	B	B
% VOC	%	0	0	0	0	0	0	45	0	0	0	0
Group	1/2/3/4	1	1	1	1	1	1	1	1	1	2	3

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PASSION PRAGMATISM PARTNERSHIP

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