

CC 10 - 90 *Straight Cutting Oil*

FEATURES

- CC oils are Chlorine-Free
- CC oils are Non-Staining
- CC oils can be used safely on all materials
- Non-Toxic, Non-Irritating, Non-Corrosive
- Easy to recycle and waste treat
- Lower misting and fewer residues

GENERAL DESCRIPTION

Hangsterfer's CC oils are designed for light and medium duty metalcutting and metalforming operations. These economically formulated oils are manufactured under the same quality control standards set for all Hangsterfer's products. Offering superior lubrication for the machine tool as well as the cutting and forming operations. CC oils provide benefits in productivity, equipment life and environmental compliance.

APPLICATIONS

CNC Swiss-style Turning	High Speed Turning and Machining
CNC Machining	General Turning and Machining
Multi-Spindle and Cam-style	Tapping & Threading
Stamping	Forming
Broaching	Gear Hobbing and Shaving
Grinding and Honing	Punching and Blanking

MATERIALS

Aluminum	Titanium
Carbon Steels, Low, medium and High	Stainless Steels
Nickel Alloys	Copper and Brass

INSTRUCTIONS

CC 10 – This is the lowest viscosity in the series. CC 10 is ideal for *high speed turning, machining and stamping*. The low viscosity enables better flow rates and allows for more heat removal.

CC 15 – This oil provides more lubricity and higher flash point than CC10 for larger diameter bar stock with low enough viscosity to flow through ultra small tooling.

CC 22 – This oil is ideal for use in *CNC Swiss-style turning centers*, especially on those requiring chlorine free oils. It has enough lubricity for the more demanding operations and materials, including lubrication of the guide-bushings.

CC 46 – This oil is ideal for the larger *multi-spindle screw machines* as well as *the cam-style screw machines*. Since CC46 is higher in viscosity than CC22, it remains in the machine to lubricate bearings, bushings, and cams and, of course, the tool-workpiece interface.

CC 62 – This oil is ideal for large diameter multi-screw, trunion and cam-style machines. CC62 has the same viscosity at #2 way oil and provides excellent protection to slide ways, bearings and guide bushings exposed to the cutting oil. This product is excellent for use in light and medium duty extruding and stamping process.

CC 90 – This is the heavy duty CC. It is used in *manual applications*, such as tapping or drilling. It can be dripped on to flat stock as it enters a press for *stamping or mild forming*. CC90 can also be used to increase the viscosity of any of the other oils in the CC Series.

MAINTENANCE

Maintenance: While straight cutting oils are not susceptible to the broad range of problems encountered with a water-based fluid, regular maintenance does improve their performance and extend their life. The CC Series oils are designed to reject foreign contaminants, such as metal fines. If the performance of the oil begins to deteriorate, remove the oil from the machine and allow it to settle in an empty drum or settling tank for 3-7 days. Fines and contaminants will settle to the bottom. After settling, return the top 80% to the clean machine. In order to get the maximum life from your oil, keep the sump free of cleaners, solvents, rust inhibitors, coolants and other contaminants which may inhibit performance.

Cleaning: All Hangsterfer's Cutting Oils are formulated to minimize cleaning time. They are cleanable in both aqueous and solvent systems. For best results use a Hangsterfer's Ozonic series cleaner or recommended aqueous cleaner. Both style cleaners work best when heated to 140°F (60°C).

PRODUCT CHARACTERISTICS

CC	10	15	22	46	62	90
Form	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Color	Golden	Golden	Golden	Golden	Amber	Amber
Odor	Mild	Mild	Mild	Mild	Mild	Mild
Specific Gravity	0.87	0.90	0.90	0.91	0.92	0.92
Viscosity: SUS @ 100°F	60	77	108	215	290	417
cSt @ 40°C	10	15	22	46	62	90
Flash Point, COC, °F/°C	350 / 177	316 / 158	405 / 207	374 / 190	392 / 200	410 / 210
Fire Point, COC, °F/°C	352 / 177	343 / 173	440 / 227	394 / 201	430 / 221	435 / 223
Pour Point, °F/°C	0 / -18	0 / -18	0 / -18	0 / -18	0 / -18	0 / -18
Solubility in Water	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%	<0.01%
Boiling Point, °F/°C	414 / 212	419 / 215	430 / 221	439/226	444 / 229	450 / 232
Vapor Pressure, mm Hg @ 25°	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
pH @ 10%	N/A	N/A	N/A	N/A	N/A	N/A

WASTE TREATMENT

If and when it is necessary to dispose of the waste coolant, the amount of coolant waste can be greatly reduced by separating the water from the oil and various contaminants which accumulate through normal machining. You can often reduce your waste disposal by more than 80%. Hangsterfer's recommends Ultra-Filtration, Chemical Treatment or Evaporation for removal of fats, oils, greases and heavy metals prior to disposal of the water phase. After approval by your local, state, or federal authorities, the waste water may be sewered, and the separated oils removed for recycling or disposal.

SHIPPING UNITS

All Hangsterfer's products are available in pails, drums and Intermediate Bulk Containers (275 or 330 gallons). All products are distributed worldwide.

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Disclaimer: All reasonable care has been taken to ensure that the information contained in this publication is true and accurate. No warranty is expressed or implied regarding the accuracy of the data. The general description, recommended uses, application data and statements in the product literature are guidelines. Because this product may be used for a variety of applications over which Hangsterfer's Laboratories, Inc. has no control, Hangsterfer's Laboratories, Inc. assumes no liability for incidental, consequential, or direct damages of any kind, regardless of causes, including negligence. Also, seller is not liable for any loss, damage or liability resulting from the use of the product in the buyer's manufacturing processes or in combination with other substances. SDS's are available for all Hangsterfer's products and should be consulted as needed.

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