

CC 10 / CC 15 / CC 22 / CC 32 / CC 46 / CC 90 (Straight Cutting Oil)

FEATURES

- Excellent Filterability
- Superior Lubricity Package
- Low Odor
- High Flash Point
- Low Foaming
- Non-Irritating
- Non-Toxic
- Chlorine Free

GENERAL DESCRIPTION

Hangsterfer's **CC series** provides benefits in productivity, equipment life, and environmental compliance. Clean Without Compromise: the operator is exposed to less mist and the machine to fewer residues. These economically priced, chlorine-free, cutting oils are designed to perform in a broad range of metalworking operations, offering superior lubrication to the machine tool and the work piece. The highly refined raw materials used in the **CC series** afford ready filterability, extending the oil's useful life.

APPLICATIONS

Primary		Secondary
Broaching	Punching	Forming
Gun Drilling	Stamping	Grinding
Honing	Tapping	Hobbing
Milling	Turning	Sawing

MATERIALS

Primary		Secondary
Aluminum	Nickel Alloys	Cast Iron
Brass	Stainless Steel	Graphite
Carbon Steel	Titanium	Plastic
Copper	Tool Steel	Precious Metals

INSTRUCTIONS

The **CC series** are used as is from the drum. Do not add other products unless recommended by Hangsterfer's.

CC 10 is the lightest of CC series: ideal for high speed turning, machining and stamping.

CC 15 and **CC 22** are the most popular CC series cutting oil viscosities. Designed to meet the increasingly popular cutting and grinding viscosity: ideal for flow through ultra-small tooling yet enough lubricity to handle larger diameter bar stock. Ideal for use in CNC Swiss-style turning centers, especially those requiring chlorine-free oils, as well as CNC Mills and Lathes.

CC 32 and **CC 46** are medium viscosity cutting oils in our CC series: ideal for automatic screw machine operations. The higher viscosity of **CC 32** and **CC 46**, means the product remains in the machine to lubricate bearings, bushings, cams, and of course, the tool work-piece interface. **CC 46** is also ideal for larger multi-spindle and cam-style screw machines.

CC 90 is the heaviest of CC series: ideal for manual applications, such as tapping or drilling. **CC 90** can be dripped on flat stock as it enters a press for stamping or mild forming. **CC 90** can also be used to increase the viscosity of any of the other oils in the CC Series.

PRODUCT CHARACTERISTICS

Product Name:	CC 10	CC 15	CC 22	CC 32	CC 46	CC 90
Form	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Color	Golden	Golden	Golden	Amber	Golden	Amber
Odor	Mild	Mild	Mild	Mild	Mild	Mild
Specific Gravity	0.87	0.86	0.90	0.86	0.91	0.92
Viscosity: SUS @ 100°F	60	78	108	153	215	417
cSt @ 40°C	10	15	22	32	46	90
Flash Point, COC, °F/°C	284 / 140	336 / 169	349 / 176	360 / 182	374 / 190	410 / 210
Fire Point, COC, °F/°C	315 / 157	361 / 183	374 / 190	380 / 193	394 / 201	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	435 / 224	439 / 226	450 / 232
Vapor Pressure, mm Hg@25°	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Active Sulfur	No	No	No	No	No	No
Chlorine	No	No	No	No	No	No

MAINTENANCE

Maintenance: 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. The **CC series** is designed to reject foreign contaminants, such as metal fines. If the performance of the oil begins to deteriorate, remove it from the machine, allowing fines and contaminants to settle in an empty drum or tank for 3-7 days, and return the top 80% to the clean machine.

Cleaning: Hangsterfer's products are formulated to be cleaned in Aqueous, Semi-Aqueous, and Solvent based cleaning systems. Depending on the required level of cleanliness one or more cleaning systems might be required. Hangsterfer's neutral pH "Clean All" (Aqueous) and "Ozonic 203" (Solvent) can be used separately or part of a multistep cleaning system. Cleaning systems agitation, pressure, ultrasonic, time, and temperature greatly aid the efficiency.

WASTE TREATMENT

Dispose of in accordance with local, state, federal and international laws. As with most used straight oils, the **CC series** can often be re-refined.

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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