

## Hard-Cut® NG / NG CF

*Straight Cutting Oils*

### HIGHLIGHTS

- Synthetic and Vegetable Based
- Very Low Viscosity & Very High Flash Point
- Non-Toxic – Non-Irritating
- Eliminate Residues
- An ultra low residue product suitable for medical manufacturing
- Pleasant Odor & Non-Misting
- Increase Productivity & Reduce Consumption
- Improve Surface Quality
- Extend Tool Life

### GENERAL DESCRIPTION

Hard-Cut NG and NG CF are the Next Generation, hence “NG”, in the full line of straight oils developed, manufactured and offered by Hangsterfer’s. Hard-Cut NG and NG CF are the most advanced straight oils on the market. No other competitive products can compare to the Hard-Cut NG’s complexity. Hard-Cut NG contains an infused combination of Synthetic and Vegetable compounds and derivatives. The infusion process results in the perfectly blended and aligned molecular structures, which allow for the lowest possible viscosity without compromise to lubricity or flash point levels.

### MAINTENANCE & CLEANING

*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 Hard-Cut 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 settling in a 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, water and other contaminants, which may reduce performance.

*Cleaning:* All Hard-Cut 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 at removing Hard-Cuts when heated to 104°F (60°C).

### APPLICATION

Hard-Cut NG and NG CF are well suited for honing of ferrous and non-ferrous materials. They are non-staining and leave little residue while providing rust protection. The extreme pressure additives in Hard-Cut provide flushing and pickup protection for the abrasive while allowing free cutting for superior finishes. Honing is a cutting operation with very small chips.

Hard-Cut NG and NG CF are suited for use with solid and expanding hones in most type honing machines. Suitable for use on hone materials but not limited to; diamond, super abrasives, ceramic and silicone carbide.

## PRODUCT CHARACTERISTICS

Product	Hard-Cut NG	Hard-Cut NG CF
Form	Liquid	Liquid
Color	Red	Amber
Odor	Mild	Mild
Specific Gravity	0.85	0.83
<b>Viscosity: SUS @ 100°F</b>	62.4	66
<b>cSt @ 40°C</b>	11.0	12
Flash Point, COC, °F/°C	335 / 168	330 / 165
Fire Point, COC, °F/°C	345 / 173	350 / 176
Pour Point, °F/°C	-125 / -87	-125 / -87
Solubility in Water	<0.01	<0.01
Boiling Point, °F/°C	212 / 100	212 / 100
Vapor Pressure, mm Hg @ 25°	<0.01	<0.01
pH @ 10%	N/A	N/A
Chlorine	Added as EP Additive	N/A

## SHIPPING UNITS

Hard-Cut NG / NG CF are available in 5 gallon, 55 gallon and Intermediate Bulk Containers (275 or 330 gallons). All products are distributed worldwide.

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