



5000 HD CUTTING OILS **(Heavy Duty Metalworking Fluids With Chlorine)**

5000 HD CUTTING OILS are a series of dark colored oils that are suitable for a difficult machining operation of ferrous metals and non-ferrous metals where staining is not important and where chlorine is permitted.

5000 HD CUTTING OILS contains special extreme pressure and lubricity additives to provide heavy-duty capable applications that leave good surface finish.

5113 and 5217 HD CUTTING OIL are recommended for medium to difficult machining operations of ferrous metals or on metals where staining is not important. Both contain an anti-misting compound that reduces stray mist in work environment.

5439 HD CUTTING OIL is contains a hefty amount of heavy-duty cutting oil additives. The superior extreme pressure characteristics of **5439 HD CUTTING OIL** reduce heat buildup and provide maximum tool life. In addition, it improves surface finish, reducing rejects.

BENEFITS:

- MAXIMIZES TOOL LIFE
- MULTI-PURPOSE CAPABILITY REDUCES INVENTORY
- IMPROVES SURFACE FINISH
- CONTAINS CHLORINE

APPLICATIONS:

HD CUTTING OILS (5000 Series) are recommended for a wide variety of machining operations and alloys that require heavy compounding.

5000 HD CUTTING OIL is recommended for heavy duty machining of all types of steels. It is especially useful in tough machining applications such as broaching, tapping and threading of less machinable metals such as stainless and chrome steels. These **HD CUTTING OILS** contain chlorine, lubricity and active sulfur additives that may stain nonferrous metals.



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TYPICAL CHARACTERISTICS

Grade	5113	5217	5439
Product Code	16851	16858	16859
API Gravity (ASTM D-1298)	30.3	23.5	22.5
Color, visual	light	dark	dark
Viscosity (ASTM D-445):			
cSt @ 40°C	29.3	32	40.3
cSt @ 100°C	5.1	4.8	5.8
SUS @ 100°F	151	158	209
SUS @ 210°F	43	42	45.7
Flash Point (ASTM D-92) °F (°C)	(206)	350 (177)	360 (180)
Total Sulfur, %	1.0	2.2	4.0
Active Sulfur, %	1.0	1.3	2.3
Chlorine content, %	1.0	1.4	2.6
Fat Content, %	3.0	6.5	10.7
Antimist	Yes	yes	no

The above data is subject to usual manufacturing variation. For more information and availability, call 1-800-442-LUBE.
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