

# ***Drill Rod & Tool Steels, Inc.***

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## ***ANALYSIS REPORT***

***AIR/OIL HARDENING, MOLYBDENUM BASE, HIGH SPEED TOOL STEEL.***

***AISI M-2  
ASTM A-686  
MIL. SPEC QQT-590  
(Class 6-6-2)  
ANNEALED***

<b>CHEMICAL ANALYSIS:</b>	<b>LIMITS.</b>	
<b>C CARBON</b>	<b>.78</b>	<b>TO .88%</b>
<b>Si SILICON</b>	<b>.20</b>	<b>.40</b>
<b>Mn MANGANESE</b>	<b>.20</b>	<b>.40</b>
<b>W TUNGSTEN</b>	<b>5.50</b>	<b>6.75</b>
<b>V VANADIUM</b>	<b>1.60</b>	<b>2.20</b>
<b>Cr CHROMIUM</b>	<b>3.75</b>	<b>4.50</b>
<b>Mo MOLYBDENUM</b>	<b>4.50</b>	<b>5.50</b>
<b>S SULPHUR</b>		<b>.30 MAX</b>
<b>P PHOSPHORUS</b>		<b>.03 MAX</b>

**QUENCHING MEDIUM: OIL, ALSO AIR.**

**HARDNESS RANGE: 63 TO 65 Rc**

**HEAT TREATMENT: Typical.**

**HARDENING TEMPERATURE 2150 TO 2250° F.**

**TEMPERING TEMPERATURE 1000 TO 1200°F. DOUBLE TEMPERING  
RECOMMENDED.**

**ANNEALING TEMPERATURE 1550 TO 1600°F.**

**MATERIAL FURNISHED IN THE ANNEALED CONDITION. UNDER 248  
BRINELL**

**ALL MATERIAL IS DFARS COMPLIANT**