

# ••• H-26 Hot Work Tool Steel



**WM H-26** is a medium carbon, 18% tungsten hot work tool steel. It has the highest resistance to softening at elevated temperatures and highest abrasion resistance of any hot work tool steel.

**WM H-26** retains good working hardness in the 1200/1300°F range along with sufficient toughness to give outstanding performance. For maximum service life, tools should be preheated before starting hot operation and air cooled when necessary during operation. **Do not water cool at any time.**

**WM H-26** is recommended when long tool and die life at elevated temperature is required.



## Chemical Composition

<b>Carbon</b>	<b>0.57</b>
<b>Tungsten</b>	<b>18.00</b>
<b>Chromium</b>	<b>4.00</b>
<b>Vanadium</b>	<b>1.00</b>



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During forging and annealing, the standard precautions applicable to all high speed steels should be followed. **WM H-26**, like all 8 to 9% molybdenum high speed steels, is subject to considerable decarburization during any heating cycle.

Salt baths or controlled atmosphere furnaces are preferable for hardening **WM H-26**. Danger of decarburization or carburization is eliminated in properly operated salt baths, while in controlled atmosphere furnaces any partial decarburization or carburization which may result is usually so slight as to be of no consequences on tools which are to be ground after hardening.

Like other high speed steels, **WM H-26** should not be held at the quenching temperature but should be removed from the furnace as soon as uniformly heated. Quenching in oil is preferred, although **WM H-26** will attain maximum hardness when cooled in air or in a hot bath at about 100°F.

For hot work applications with the .60% carbon grade, a wider hardening range is permissible depending upon the application. Normally, a temperature of 2100-2150°F will be employed. For higher hot hardness and wear resistance, the temperature should be raised, and for higher toughness it should be lowered. The lower carbon **WM H-26** can be quenched, in air, oil or hot salt bath. Usually oil quenching is recommended.

The effect of hardening temperature on .60% carbon- **WM H-26** is shown below:

Hardening Temp °F	Oil Quenched Hardness (Rockwell C)	Double Tempered (2 1/8 - 2 1/2 hrs) At 1050°F	Intercept Grain Size
1650	33	35	-
1750	42	43	
1850	47	48	
1950	52	52	
2000	55	54	
2050	57	55	17
2100	59	57	14
2150	62	58	11
2200	63	60	9
2250	62	61	6

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