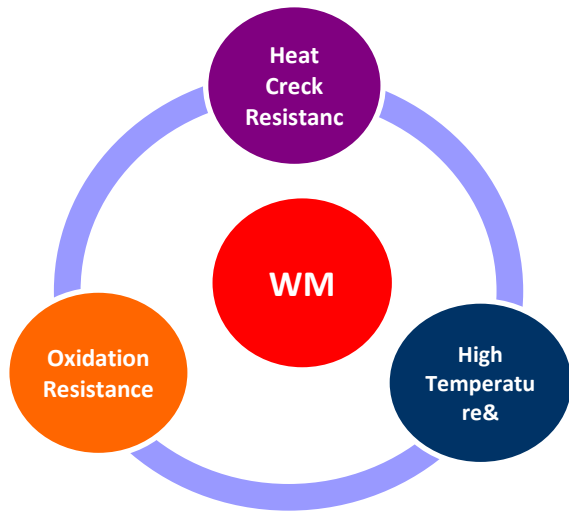
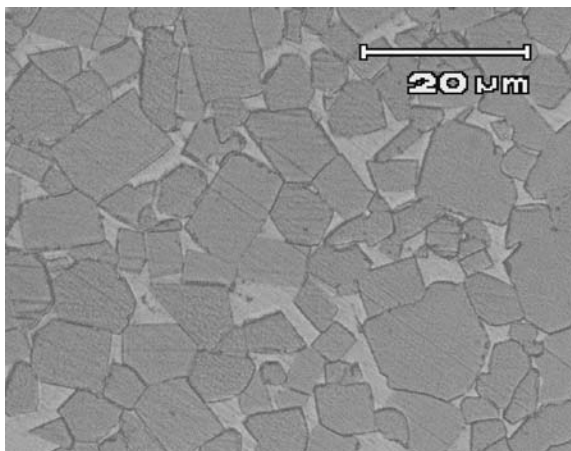


# WARM · HOT FORING DIE & MOLD MATERIAL: WM

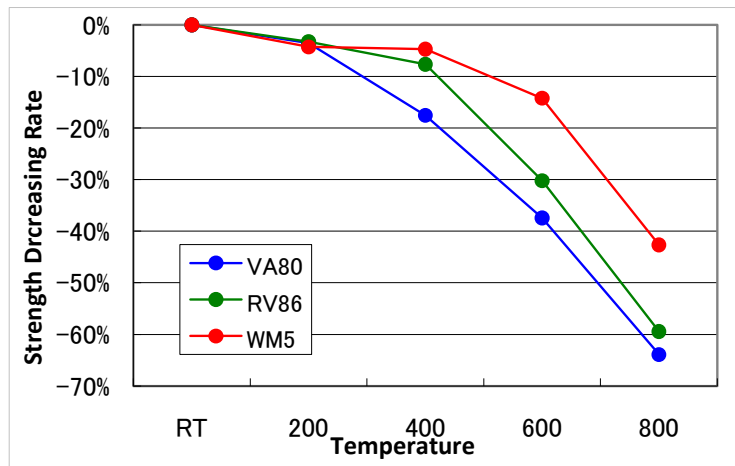


WM Series are heat-resisting material improved the bonded phases, which are adapted to the fields of warm and hot forging, adopting coarse particle WC. They are excellent in impact resistance by improving fracture toughness and inhibiting crack sensitivity as well as reducing occurrence factor of fatigue cracking with micro texture control.

Next, they have the characteristics in intermetallic superior wear and corrosion resistant due to bonded phases anchored by high-temperature stabilized phases. In addition, they have been trying to improve oxidation resistance by formation of protective surface film from activating action of solid solution elements.



WM Microstructure



High-temperature Strength Characteristic

## WM Series Mechanical Characteristics

Material Grade	Density (g/cm <sup>3</sup> )	Hardness (HRA)	TRS (GPa)	Compressive Strength (GPa)	Fracture Toughness (MPa·m <sup>1/2</sup> )
WM5	14.75	86.5	2.1	4.1	21
WM7	14.40	85.0	2.1	3.9	23
WX80	13.70	83.0	2.4	3.5	26

We provide many material grades to meet your needs.  
Please feel free to inquire.

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