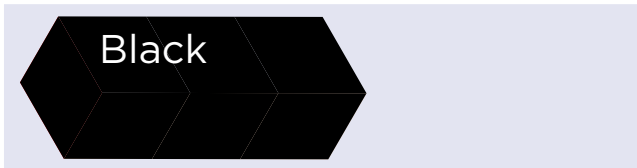


## Colour Code



## Characteristics

DRM1 is an entirely new Matrix type high speed tool steel specifically designed for hot and warm forging operations. High toughness compared with conventional hot work grades.

- Good hardness at 58 HRC.
- Excellent resistance to heat checking.
- High softening resistance and hot hardness.
- Double melting ensures great cleanliness and very low inclusion levels.



## Typical Applications

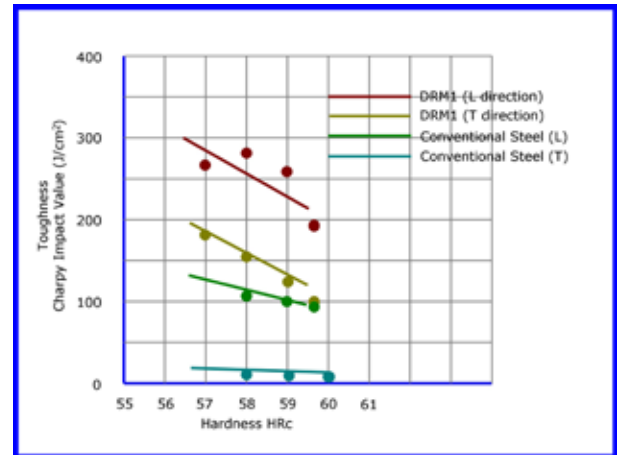
- Hot forging dies and punches.
- Warm forging dies and punches.

## Stock

CARRS DRM1 is stocked in a range of diameters and plate and cut to customers requirements

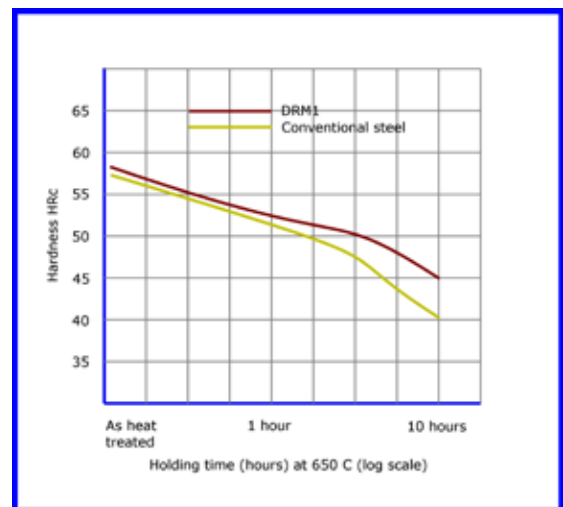
## Toughness

DRM1 is significantly tougher in both the longitudinal and transverse directions



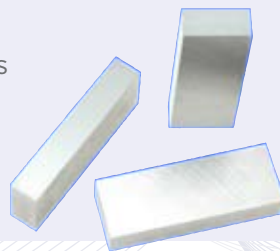
## Resistance to Softening

All tool steels temper back to a greater or lesser extent as they are exposed to high temperatures but DRM1 has a considerably greater resistance to softening than other hot work tool steels.



## READYMILLED.COM

Rectangular sections from 25mm<sup>3</sup> up to 430 X 430 X 150mm can be delivered fine milled on all six faces to - 0+0.1mm and with squareness guaranteed to 0.1mm/m.



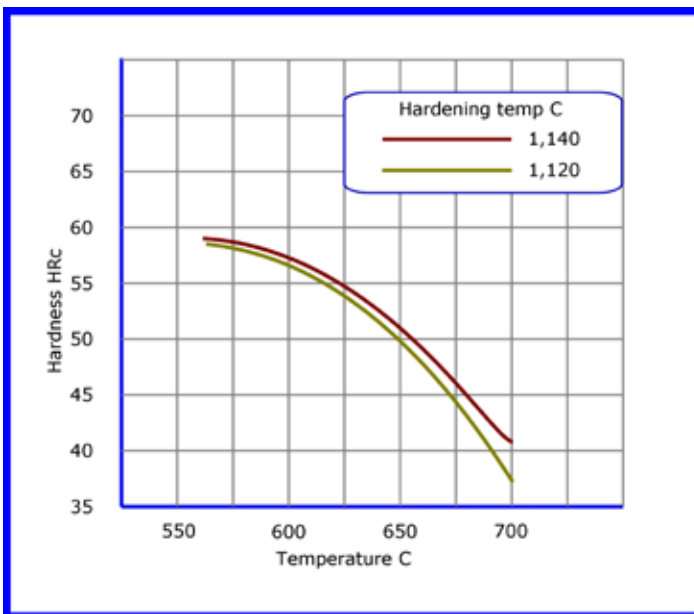
# HEAT TREATMENT

## Hardening Vacuum Furnace

Raise temperature to 950C and hold for 30 minutes then raise to 1,120 – 1,140C and hold for 30 to 90 minutes depending on the maximum section. Gas quench with a minimum of 6 bar. It is important to maintain a high quench rate below 500C to ensure high toughness to suppress lower Bainitic transformation.

## Tempering

Double tempering is essential for optimum properties. The final tempering temperature should be selected with the following characteristics in mind.



Tempering Temperature (c)	Hardness HRC	Characteristics
600	56	Maximum toughness
580	57	Good toughness and wear resistance
550	58	Maximum wear resistance