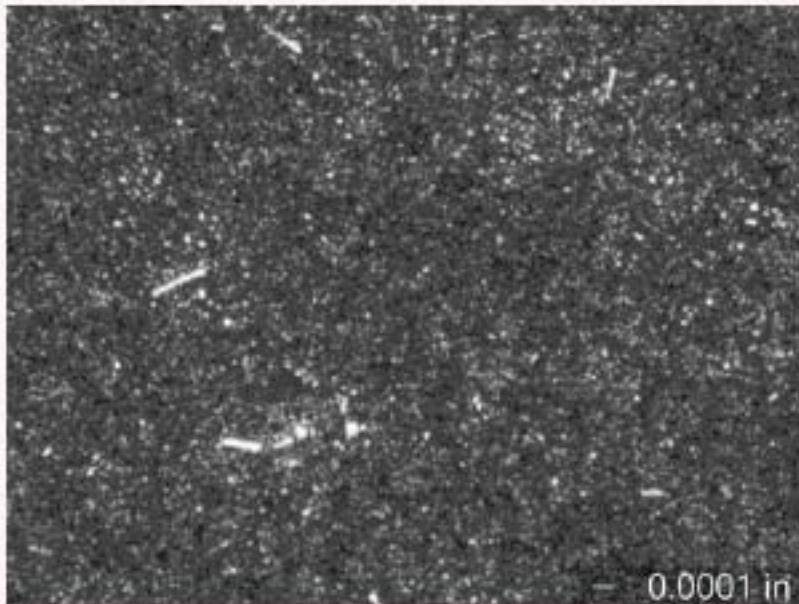


Cru Forge V is a vanadium modified high carbon blade steel specifically designed to offer the forgeability of carbon steels such as W1, 1086, or 52100, while providing improved wear resistance in finished blades. The addition of vanadium promotes the formation of hard vanadium carbides in the microstructure, adding to the abrasive wear resistance of the material compared to plain high carbon steels.

It may be readily forged and heat treated using standard practices used for high carbon blade steels.

Microstructure



Microstructure of quenched and tempered Cru Forge V (500x)

Carbon	1.05
Chromium	0.50%
Vanadium	0.75%
Manganese	0.75%

Thermal Treatments

Forging: 1700-2000 °F Do not forge below 1600 °F. Slow cool or anneal after forging.

Annealing

Heat to 1450 °F, hold long enough to make sure temperature is uniform, slow cool to below 200 °F.

Annealed Hardness: About BHN 180

Hardening

Preheat: Heat to 1200-1250 °F (650-675 °C) Equalize.

Austenitize: Heat to 1500-1550 °F (820-845 °C) Equalize. Quench in oil.

Temper: Double temper at 400-500 °F recommended. Approximate hardness after double tempering is shown below. Actual hardness will depend on hardening temperature and quench rate.

Temper:	350	400	425	450	500	550	600
HRC:	62	61	59	58	58	56	55

Note: Properties shown throughout this data sheet are typical values. Normal variations in chemistry, size and heat treat conditions may cause deviations from these values. For additional data or metallurgical engineering assistance, consult your local Crucible Service Center.

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