



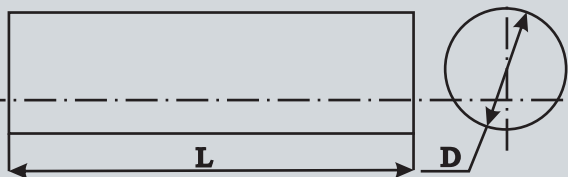
**Virial**<sup>®</sup>  
Virial, Ltd

# Hard metal rods



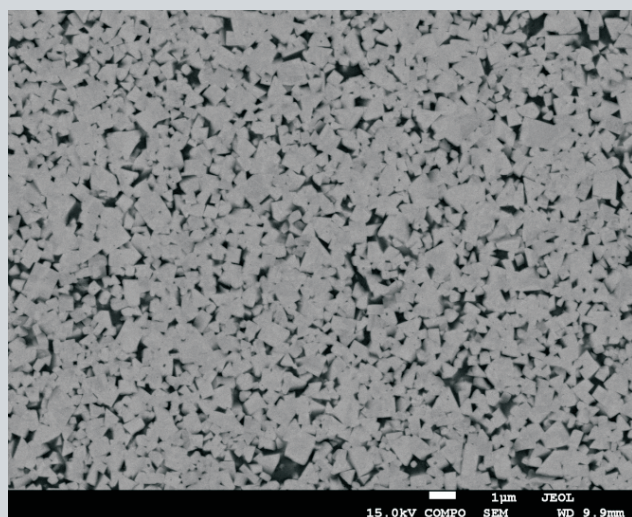
## Applications:

- P** Structural and low-alloyed steels
- M** Stainless steel
- K** Grey, malleable and high-strength cast iron grades
- H** Hardened steels
- S** Refractory, Ti-based alloys
- N** Non-ferrous metals



Rods	L, mm	D, mm	Ra, $\mu\text{m}$
Machined	Up to 200 $\pm$ 1%	(5 - 20) h6	0,2

## Microstructure



Parameters	VHS10	VHS12
Cobalt contents, %	10	12
Density, g/cm	14.4 - 14.6	14.0 - 14.2
Strength, MPa	$\geq$ 4000	$\geq$ 4000
HRA hardness	92.5	92.0
Impact toughness, kJ/m	50 - 60	60 - 70
Grain size, m	0.6	0.6
Coercitivity, K A/m	20 - 22	23 - 25