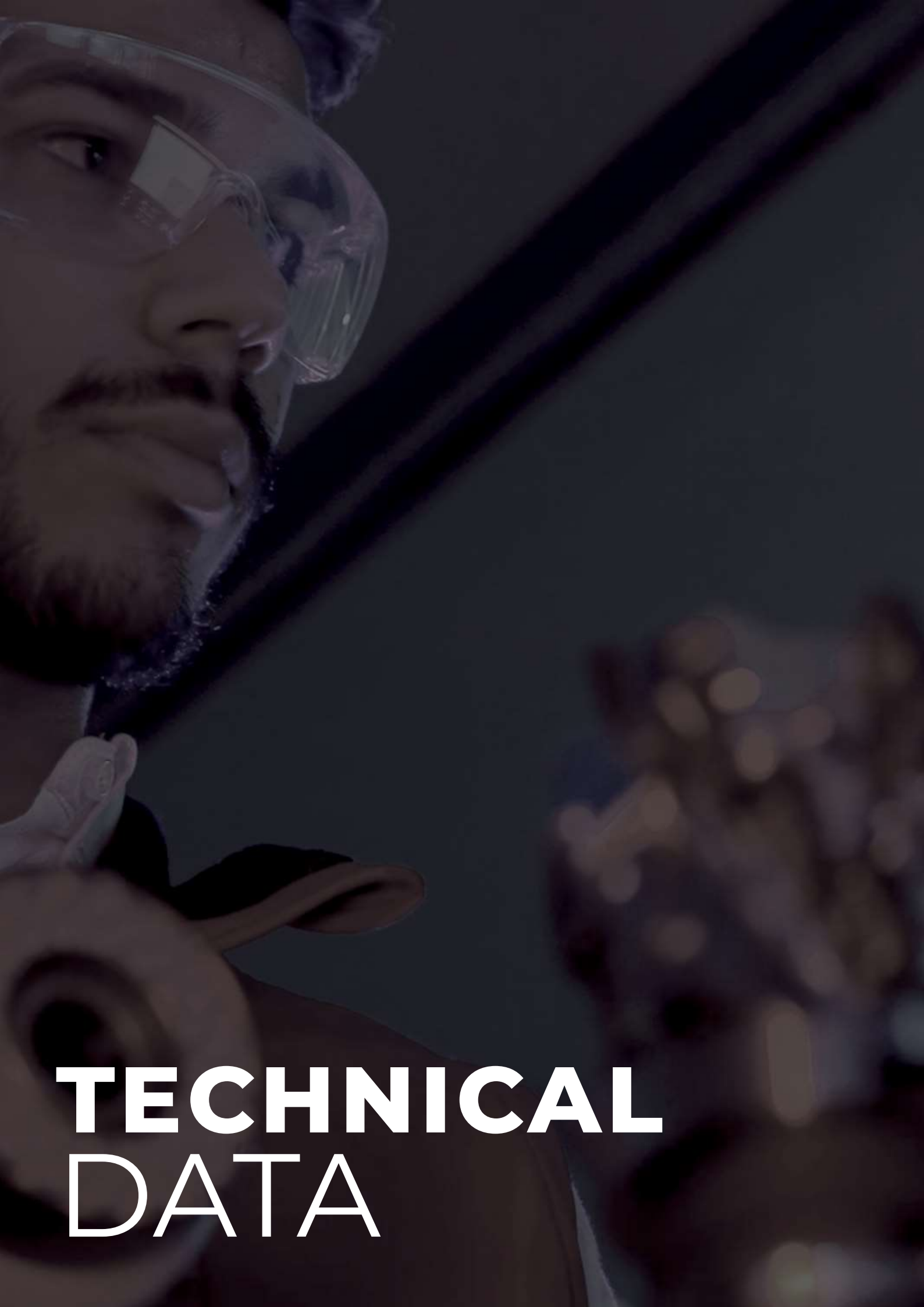




TECHNICAL DATA

	1	5	10	15	20	25	30	35	40	45	50	
P STEEL				PH7920								PVD
				PHP920								
						PHP930						
		PH5115										CVD
				PH5125								
						PH5135						
						PHS135						
M STAINLESS SEEL				PH7920								PVD
					PHP920							
					PHP930							CVD
					PHS135							
K CAST IRON				PH5705								CVD
		PH5320										
					PH5135							
					PHS135							
N ALUMINIUM & NFM		PH0910										UNCOTED
S HEAT RESISTANT / TITANIUM ALLOYS				PH7920								PVD
				PHP920								
					PHP930							

PVD GRADES

PH7920

P10-P35
M10-M25
S10-S30

A hard carbide substrate coated with PVD coating. Suitable for machining under good conditions or lightly interrupted cuts.

PHP920

P10-P35
M10-M25
S10-S30

A hard carbide insert coated with revolutionary PVD coating with great adhesion and smoothness. Recommended for machining under good conditions or lightly interrupted cuts at medium to high cutting speeds.

PHP930

P20-P40
M20-M40
S15-S35

A tough carbide insert coated with revolutionary PVD coating with great adhesion and smoothness. Recommended for machining under lightly to highly interrupted cuts at low to medium cutting speeds.

CVD GRADES

PH5

A thick CVD coating with a smooth surface. Works great at medium temperatures.

WEAR RESISTANCE

TOUGHNESS

PH5705

K05-K15

PH5320

K01-K25

PH5115

P10-P25

PH5125

P20-P35

PH5135

P20-P40
K15-K30

PHS

PHS135

P20-P40
M15-M35
K15-K30

A tough substrate combined with a thin CVD coating with excellent thermal resistance and hardness at high temperature. Excellent solution for difficult operations at low velocities.

UNCOATED CARBIDE GRADE

PH0910

N01-N20

Uncoated carbide with polished surface. 1st choice for machining aluminum alloys.

RECOMMENDED GRADES AND CUTTING SPEEDS (M/MIN)

Graus recomendados e velocidades de corte (m/min) | Calidades recomendadas y velocidades de corte (m/min)

ISO	Material	Grade fn (mm/r) HB (brinell)	CVD Coating				PVD Coating		
			← Wear Resistance				Toughness →		
			PH5115	PH5125	PH5135	PHS135	PH7920	PHP920	PHP930
			0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5
P	Unalloyed steel	125-170	90-180	80-170	70-160	70-160	60-160	60-160	50-150
	Low-alloy steel	180-350	70-160	60-150	60-140	60-150	60-140	60-150	50-140
	High-alloy steel	200-325	50-150	40-140	40-130	40-140	50-130	50-140	40-130

ISO	Material	Grade f _n (mm/r) HB (brinell)	CVD Coating	PVD Coating		
			← Wear Resistance			Toughness →
			PHS135	PH7920	PHP920	PHP930
			0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5
M	SS - Ferritic / Martensitic	200-330	70-150	60-140	60-140	50-130
	SS - Austenitic / Duplex	180-330	60-130	60-120	60-130	50-110
	SS - Ferritic / Duplex	230-260	40-120	40-110	40-120	40-110

ISO	Material	Grade fn (mm/r) HB (brinell)	CVD Coating			
			← Wear Resistance → Toughness →			
			PH5705	PH5320	PH5115	PHS135
			0.04 - 0.5	0.04 - 0.5	0.04 - 0.5	0.04 - 0.5
K	Marble cast iron	130-230	100-220	90-210	90-200	80-170
	Grey cast iron	180-220	100-200	90-190	80-180	70-150
	Nodular cast iron	160-380	80-170	80-160	70-150	50-140

ISO	Material	Grade fn (mm/r) HB (brinell)	Uncoated
			PH0910
			0.04 - 0.35
N	Aluminium alloys	60-130	190-1800

ISO	Material	Grade fn (mm/r) HB (brinell)	PVD Coating		
			← Wear Resistance → Toughness →		
			PH7920	PHP920	PHP930
			0.04 - 0.30	0.04 - 0.30	0.04 - 0.30
S	Heat resistant super alloys (Iron base)	200-280	35-90	-	-
	Heat resistant super alloys (Nickel base)	250-320	22-60	-	-
	Heat resistant super alloys (Cobalt base)	200-320	30-90	30-90	20-80