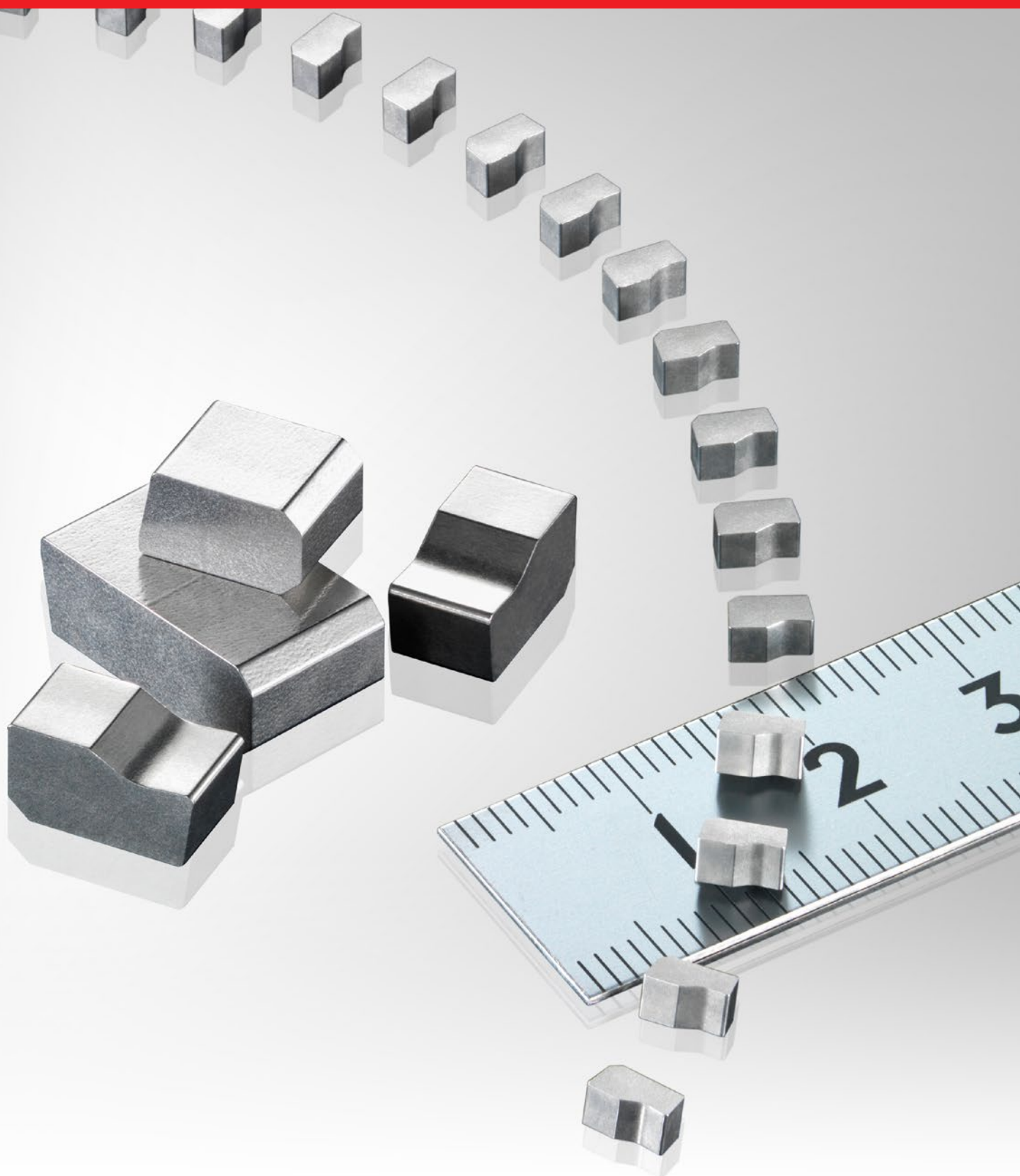


CARBIDE & CERMET TIPS for CIRCULAR SAW BLADES



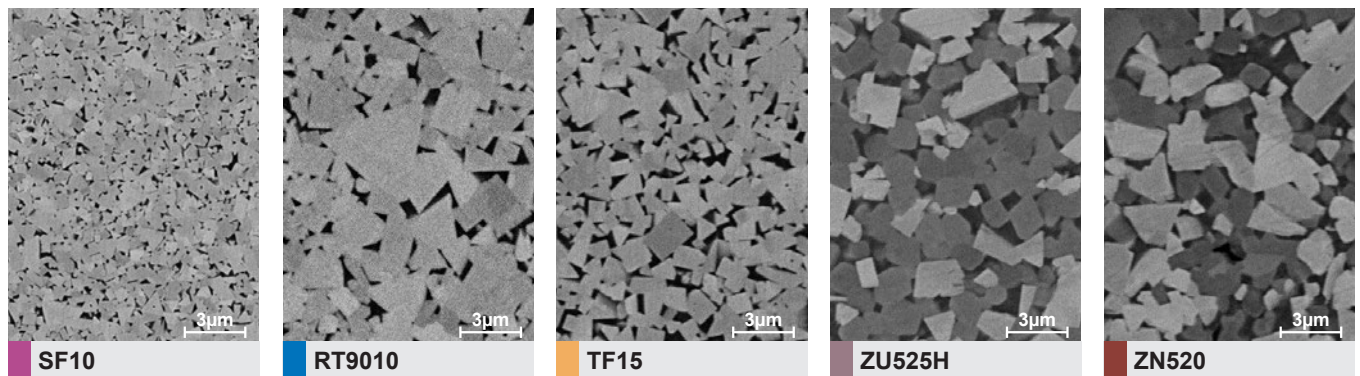
Carbide & Cermet Tips for Circular Saw Blades

Tungsten Carbide Grade Properties

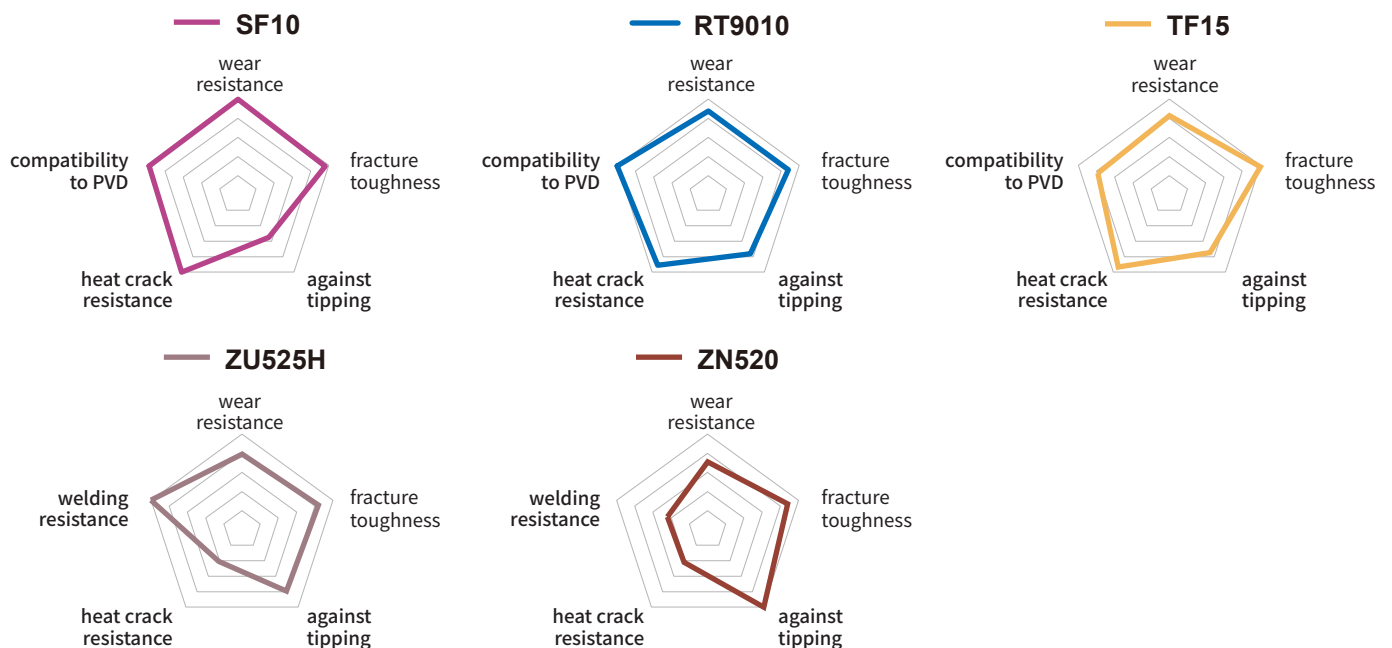
Grade	ISO Code	Grain Size (μm)	Co (mass%)	TRS (GPa) *1	Hardness		Thermal Conductivity (W/m·K)	Fracture Toughness (MPa·m ^{1/2})	Work Material			
					HRA *2	HV *3			General Steel	Special Steel	Stainless Steel	Non-ferrous Metal
SF10	K01	<0.8	6.0	3.8	92.7	1830	79	6.6		○		○
RT9010	K20	<1.5	5.7	2.2	91.8	1620	79	9.0		○		○
TF15	K20	<0.9	10.0	2.5	91.0	1550	71	8.7		○		○
ZU525H	P30	<3.0	12.5	2.1	90.5	1450	41	9.5	○	○	◎	
ZN520	P40	<3.0	12.0	2.2	89.3	1300	40	12.0	○	○	○	

*1 ISO03327 *2 ISO03738 *3 ISO03878

《SEM Pictures》



《Properties of Grade》

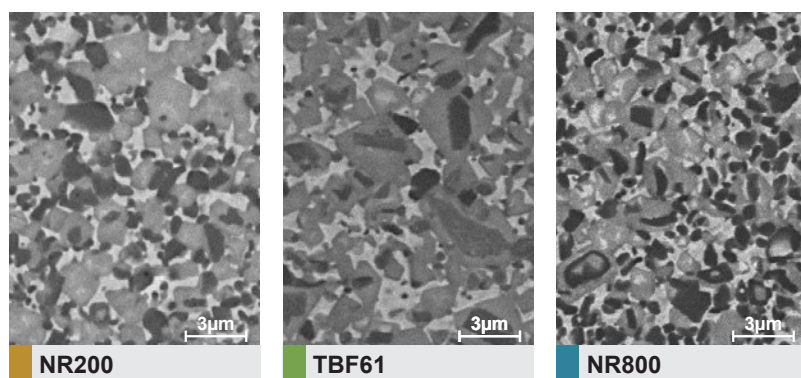


■ Cermet Grade Properties

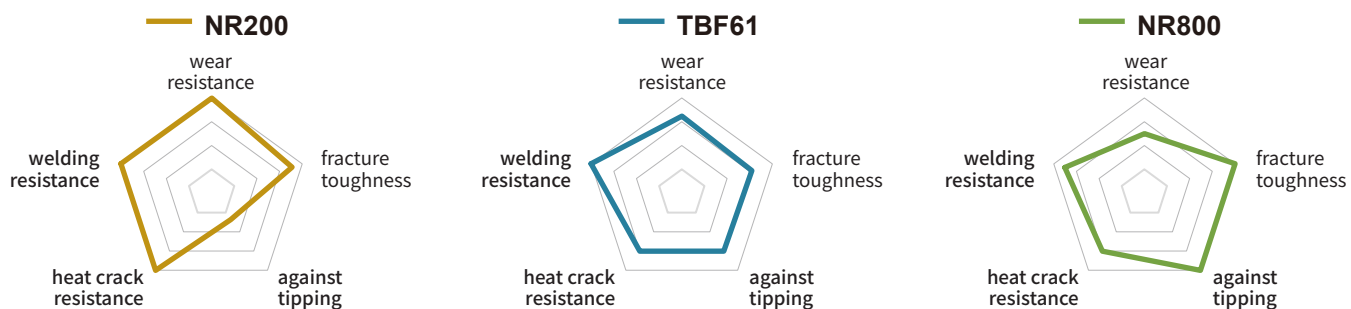
Grade	ISO Code	Grain Size (μm)	Chemical Composition			TRS (GPa) *1	Hardness		Thermal Conductivity ($\text{W/m}\cdot\text{K}$)	Fracture Toughness ($\text{MPa}\cdot\text{m}^{1/2}$)	Work Material General Steel
			TiCN (mass%)	Co+Ni (mass%)	Others (mass%)		HRA *2	HV *3			
NR200	P10	<1.5	53	19	28	2.1	91.5	1570	19	5.3	○
TBF61	P20	<2.0	52	19	29	2.0	90.5	1450	18	5.5	◎
NR800	P30	<1.5	48	23	29	2.2	90.0	1370	13	7.2	○

*1 ISO03327 *2 ISO03738 *3 ISO03878

《SEM Pictures》



《Properties of Grade》



Standard Tips

Geometry	Order Number	Dimensions (mm)							
		L	H	T	θ°	A	B	C	D
SBA type 	SBA-4X1.5XTX10%	4.0	1.5	2.0-3.5	10	0.5	—	—	—
	SBA-4X2XTX15%	4.0	2.0	2.0-4.5	15	0.5	—	—	—
	SBA-5X1.5XTX20%	5.0	1.5	2.0-3.5	20	0.5	—	—	—
	SBA-5X2XTX15%	5.0	2.0	2.0-4.5	15	0.5	—	—	—
	SBA-5X2.5XT	5.0	2.5	2.0-5.0	0	—	—	—	—
	SBA-5X2.5XTX8%	5.0	2.5	2.0-5.0	8	0.5	—	—	—
	SBA-5X3XTX8%	5.0	3.0	2.0-5.0	8	0.5	—	—	—
	SBA-6X2XTX8%	6.0	2.0	2.0-4.5	8	0.5	—	—	—
	SBA-6X2XTX45%	6.0	2.0	2.0-4.5	45	1.5	—	—	—
	SBA-7X2.2XTX8%	7.0	2.2	2.0-5.0	8	0.5	—	—	—
	SBA-7X2.5XT	7.0	2.5	2.0-5.0	0	—	—	—	—
	SBA-7X2.5XTX8%	7.0	2.5	2.0-5.0	8	0.5	—	—	—
	SBA-7X2.5XTX20%	7.0	2.5	2.0-5.0	20	0.5	—	—	—
	SBA-7X3XT	7.0	3.0	2.0-5.0	0	—	—	—	—
SBB type 	SBB-4X1.8XTX15%	4.0	1.8	2.0-4.0	15	0.5	1.0	0.5	—
	SBB-4X2XTX15%	4.0	2.0	2.0-4.5	15	0.5	1.0	0.5	—
	SBB-4X2.3XTX10%	4.0	2.3	2.0-5.0	10	0.5	0.5	0.5	—
	SBB-5X1.8XTX15%	5.0	1.8	2.0-4.0	15	0.5	1.0	0.5	—
	SBB-5X2.3XTX10%	5.0	2.3	2.0-5.0	10	0.5	0.5	0.5	—
	SBB-6X2XTX15%	6.0	2.0	2.0-4.5	15	0.5	1.0	0.5	—
	SBB-6X2.3XTX10%	6.0	2.3	2.0-5.0	10	0.5	0.5	0.5	—
	SBB-7X2.3XTX10%	7.0	2.3	2.0-5.0	10	0.5	0.5	0.5	—
SFA type 	SFA-3.3X2XT	3.3	2.0	2.0-4.5	—	—	—	—	1.5
	SFA-3.5X2XT	3.5	2.0	2.0-4.5	—	—	—	—	1.6
	SFA-4X2.5XT	4.0	2.5	2.0-5.0	—	—	—	—	1.8
	SFA-4.5X2.5XT	4.5	2.5	2.0-5.0	—	—	—	—	2.0
	SFA-5X2.5XT	5.0	2.5	2.0-5.0	—	—	—	—	2.2
SFB type 	SFB-3.5X2XT	3.5	2.0	2.0-4.5	—	—	—	—	1.6
	SFB-4X2.5XT	4.0	2.5	2.0-5.0	—	—	—	—	1.8
	SFB-4.5X2.5XT	4.5	2.5	2.0-5.0	—	—	—	—	2.0
SFF type 	SFF-4.8X2.5XT	4.8	2.5	2.0-5.0	—	—	—	—	—

Note 1) ○° shows θ°.

Note 2) Please contact us for any geometry.

Note 3) Dimensions and tolerances not specified are factory standards.

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