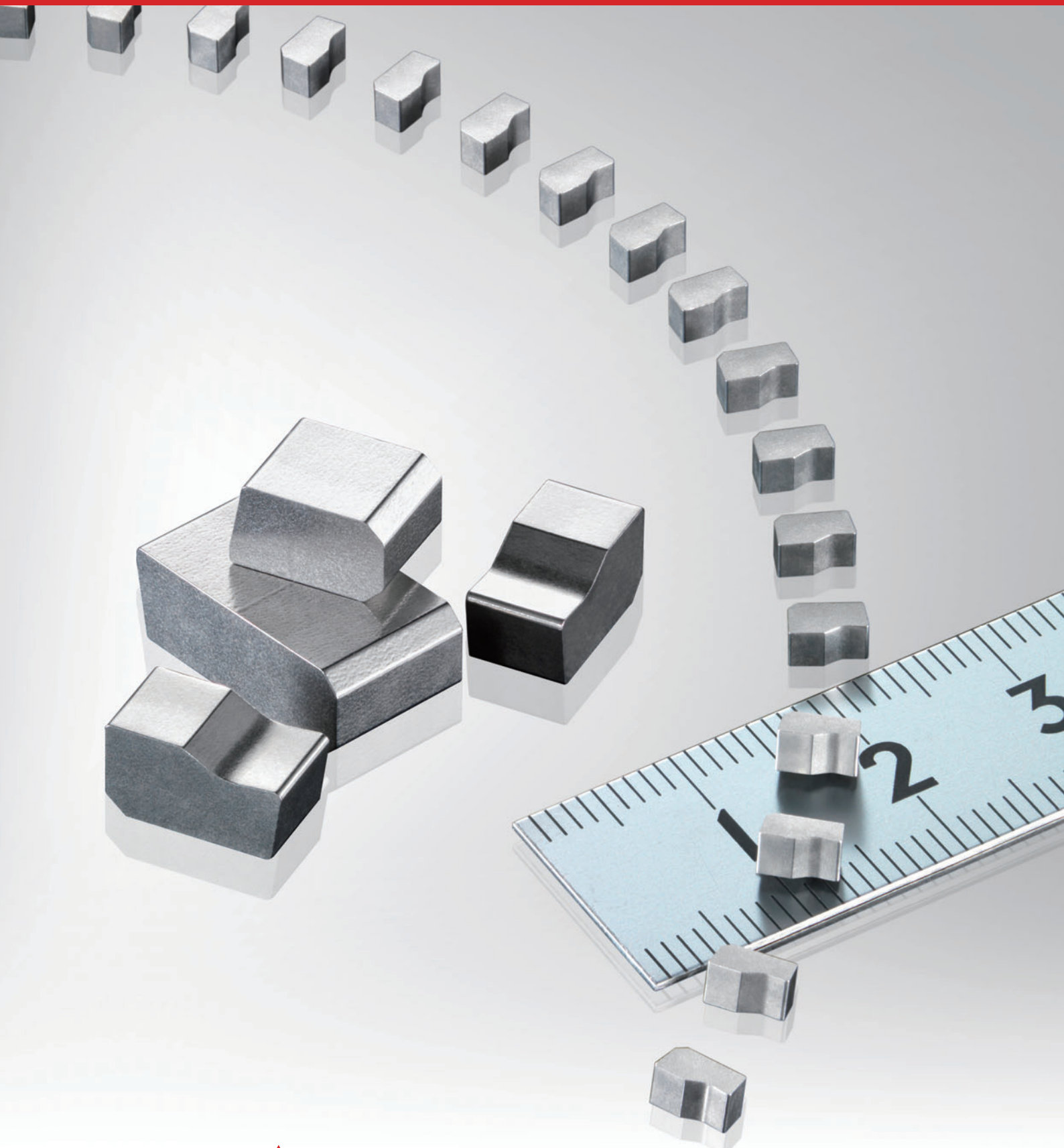


CARBIDE & CERMET TIPS for CIRCULAR SAW BLADES



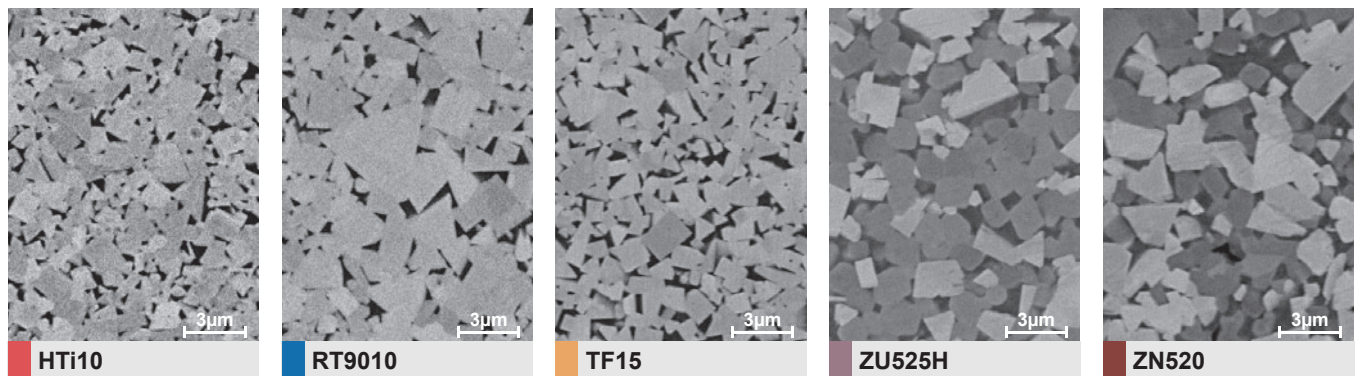
Carbide & Cermet Tips for Circular Saw Blades

Tungsten Carbide Grade Properties

Grade	ISO Code	Grain Size (μm)	Co (mass%)	TRS (GPa) *1	Hardness		Fracture Toughness (MPa·m ^{1/2})	Work Material			
					HRA *2	HV *3		General Steel	Special Steel	Stainless Steel	Non-ferrous Metal
HTi10	K10	<1.0	6.0	2.0	92.0	1700	6.8		○		○
RT9010	K20	<1.5	5.7	2.2	91.8	1620	9.0		○		○
TF15	K20	<0.9	10.0	2.5	91.0	1550	8.7		○		○
ZU525H	P30	<3.0	12.5	2.1	90.5	1450	9.5	○	○	⊙	
ZN520	P40	<3.0	12.0	2.2	89.3	1300	12.0	○	○	○	

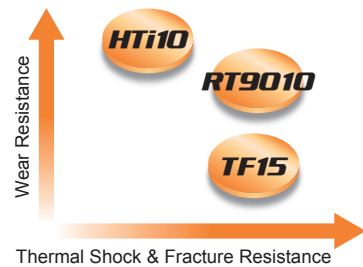
*1 ISO03327 *2 ISO03738 *3 ISO03878

《SEM Pictures》

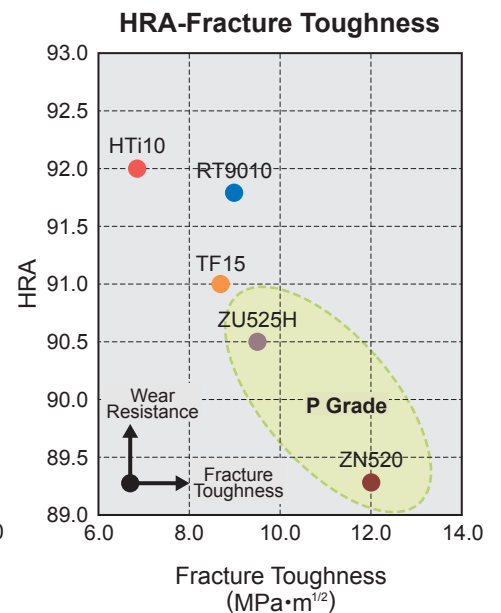
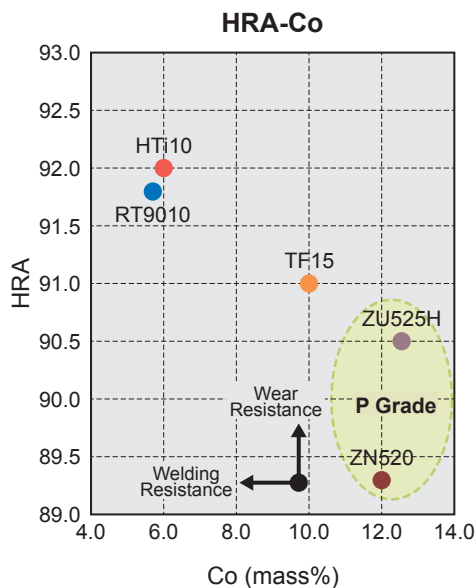
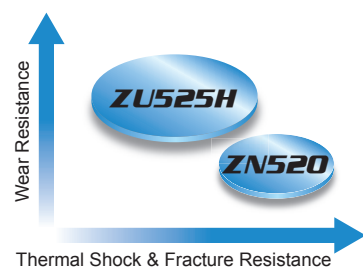


《Properties of Grade》

● K Grade



● P Grade

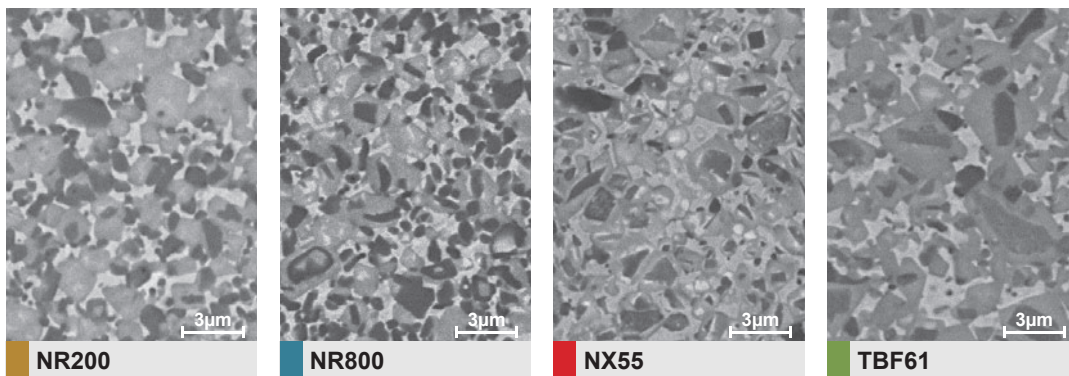


■ Cermet Grade Properties

Grade	ISO Code	Grain Size (μm)	Chemical Composition			TRS (GPa) *1	Hardness		Fracture Toughness (MPa·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	5.3	○
NR800	P30	<1.5	48	23	29	2.2	90.0	1370	7.2	○
NX55	P10	<2.0	49	18	33	2.0	91.2	1500	6.1	○
TBF61	P20	<2.0	52	19	29	2.0	90.5	1450	5.5	◎

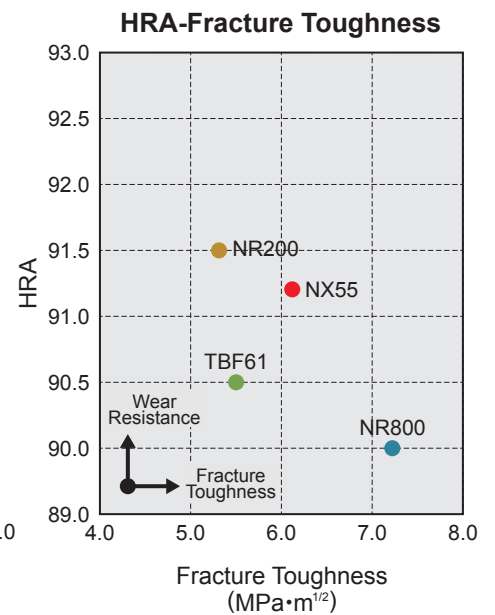
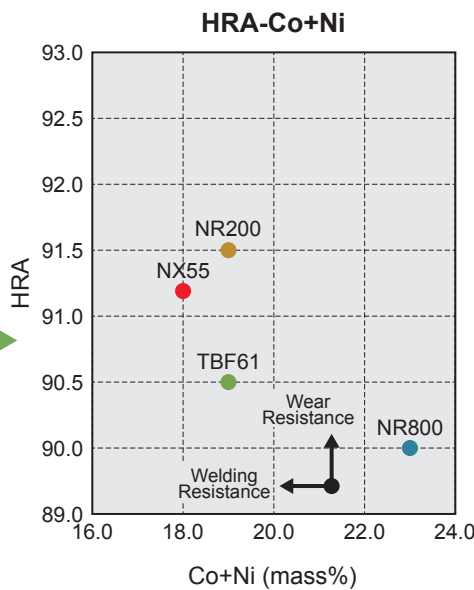
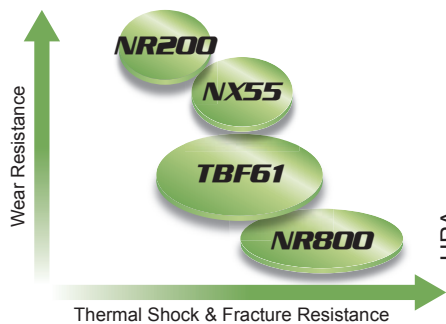
*1 ISO03327 *2 ISO03738 *3 ISO03878

《SEM Pictures》

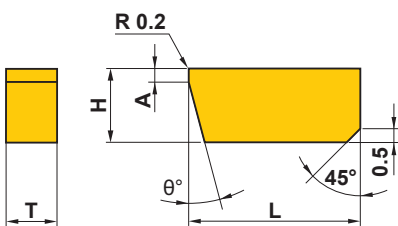
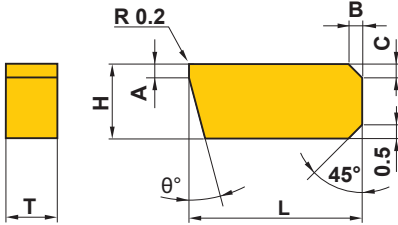
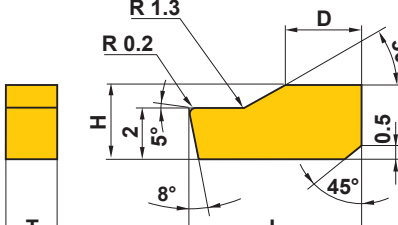


《Properties of Grade》

● Cermet



Standard Tips

Geometry	Order Number	Dimensions (mm)									
		L	H	T	θ°	A	B	C	D		
SBA type 	SBA-4x1.5xTx10%	4	± 0.2	1.5	± 0.2	2-5	10	0.5	-	-	-
	-4x2xTx15%	4	± 0.2	2	± 0.2	2-5	15	0.5	-	-	-
	-5x1.5xTx20%	5	± 0.2	1.5	± 0.2	2-5	20	0.5	-	-	-
	-5x2xTx15%	5	± 0.2	2	± 0.2	2-5	15	0.5	-	-	-
	-5x2.5xT	5	± 0.2	2.5	± 0.2	2-5	0	-	-	-	-
	-5x2.5xTx8%	5	± 0.2	2.5	± 0.2	2-5	8	0.5	-	-	-
	-5x3xTx8%	5	± 0.2	3	± 0.2	2-5	8	0.5	-	-	-
	-6x2xTx8%	6	± 0.2	2	± 0.2	2-5	8	0.5	-	-	-
	-6x2xTx45%	6	± 0.2	2	± 0.2	2-5	45	1.5	-	-	-
	-7x2.2xTx8%	7	± 0.2	2.2	± 0.2	2-5	8	0.5	-	-	-
	-7x2.5xT	7	± 0.2	2.5	± 0.2	2-5	0	-	-	-	-
	-7x2.5xTx8%	7	± 0.2	2.5	± 0.2	2-5	8	0.5	-	-	-
	-7x2.5xTx20%	7	± 0.2	2.5	± 0.2	2-5	20	0.5	-	-	-
	-7x3xT	7	± 0.2	3	± 0.2	2-5	0	-	-	-	-
-9x3xTx20%	9	± 0.2	3	± 0.2	2-5	20	0.5	-	-	-	
SBB type 	SBB-4x1.8xTx15%	4	± 0.2	1.8	± 0.2	2-5	15	0.5	1	0.5	-
	-4x2xTx15%	4	± 0.2	2	± 0.2	2-5	15	0.5	1	0.5	-
	-4x2.3xTx10%	4	± 0.2	2.3	± 0.2	2-5	10	0.5	0.5	0.5	-
	-5x1.8xTx15%	5	± 0.2	1.8	± 0.2	2-5	15	0.5	1	0.5	-
	-5x2.3xTx10%	5	± 0.2	2.3	± 0.2	2-5	10	0.5	0.5	0.5	-
	-6x2xTx15%	6	± 0.2	2	± 0.2	2-5	15	0.5	1	0.5	-
	-6x2.3xTx10%	6	± 0.2	2.3	± 0.2	2-5	10	0.5	0.5	0.5	-
-7x2.3xTx10%	7	± 0.2	2.3	± 0.2	2-5	10	0.5	0.5	0.5	-	
-7x2.5xTx10%	7	± 0.2	2.5	± 0.2	2-5	10	0.5	0.5	0.5	-	
SFA type 	SFA-4x2.5xT	4	± 0.2	2.5	± 0.2	2-5	-	-	-	-	1.8
	-4.5x2.5xT	4.5	± 0.2	2.5	± 0.2	2-5	-	-	-	-	2
	-5x2.5xT	5	± 0.2	2.5	± 0.2	2-5	-	-	-	-	2.2

Note 1) $\circ\circ\%$ shows θ° .

Note 2) Please contact us for any geometry.

MITSUBISHI MATERIALS CORPORATION

ADVANCED MATERIALS & TOOLS COMPANY

7F, KFC bldg., 1-6-1, Yokoami, Sumida-ku, Tokyo 130-0015, Japan

TEL +81-3-5819-5316 FAX +81-3-5819-5310

<http://blank.mitsubishicarbide.com>

