
MX3030

NEW CERMET GRADE FOR A WIDER RANGE OF APPLICATIONS



MX3030

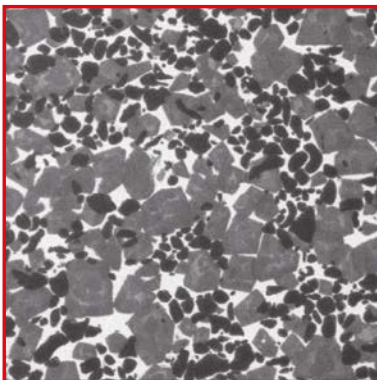
NEW CERMET GRADE FOR A WIDER RANGE OF APPLICATIONS

Enables excellent surface finishes even at high efficiency machining conditions.

IMPROVED MACHINING EFFICIENCY BY MAINTAINING EXCELLENT SURFACE FINISHES EVEN AT LARGE DEPTHS OF CUT

Cermet has a low affinity with iron, excellent thermal stability and oxidation resistance, and is therefore a suitable grade for finishing. However, it does not have the same bonding strength as cemented carbide thereby creating the challenge to compensate for fracture resistance.

MX3030 solves the challenge with higher thermal conductivity than conventional products and has excellent thermal cracking resistance. Therefore, it is possible to suppress wear and maintain high quality surface finishes. Also, since MX3030 has excellent toughness, improved machining efficiency even at large depths of cut can be realised.



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A special alloy is used for the binder material



Fracture resistance properties increased

High hardness Ti compound particles are used in the substrate



High wear resistance properties

MILD STEEL DIN ST37-2 SURFACE FINISH COMPARISON

Material	DIN ST37-2
DC (mm)	125
Vc (m/min)	200
fz (mm/t)	0.1
ap (mm)	2.0
ae (mm)	100
Cutting mode	Dry cutting, 8 Inserts, Centre cut, After 8 m cutting work



MX3030



Conventional

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INSERTS

P	Steel	◆	◆	Please note that the cutting conditions differ depending on multiple factors, for more details refer to the recommended cutting conditions.
M	Stainless steel	◆	◆	
K	Cast iron	◆	◆	

Edge preparation: E: Round S: Chamfer + Round T: Chamfer

Order number	Hand	Class	Edge preparation	NEW		IC	S	BS	RE	Geometry				
				MX3030	NX4545									
SNGU140812ANER-L	R	G	E	●	●	14.0	8.4	1.5	1.2	WSX445 				
SNGU140812ANER-M	R	G	E	●	●									
SNMU140812ANER-M	R	M	E	●	●									
SNGU140812ANEL-L	L	G	E	★	●									
SNGU140812ANEL-M	L	G	E	★	●									
SNMU140812ANEL-M	L	M	E	★	●									
NEW SEET13T3AGEN-JL	—	E	E	●	●	13.4	3.97	1.9	1.5	ASX445 				
NEW SEMT13T3AGSN-JM	—	M	S	●	●									
NEW SOET12T308PEER-JL	R	E	E	●	●	12.7	3.97	1.4	0.8	ASX400 				
NEW SOMT12T308PEER-JM	R	M	E	●	●									
NEW OEMX12T3ETR1	R	M	T	★	●	12.7	3.97	1.0	—	OCTACUT 				
NEW OEMX1705ETR1	R	M	T	★	●						17.0	5.0	1.4	—
NEW RPMW10T3M0E	—	M	E	★	●	10.0	3.97	—	—	BRP 				
NEW RPMW1204M0E	—	M	E	★	●						12.0	4.76	—	—
NEW SPMW090304	—	M	T	★	●	9.525	3.18	—	0.4	CESP, SFSP, CGSP 				
NEW SPMW090308	—	M	T	★	●						9.525	3.18	—	0.8
NEW SPMW120304	—	M	T	★	●						12.7	3.18	—	0.4
NEW SPMW120308	—	M	T	●	●						12.7	3.18	—	0.8

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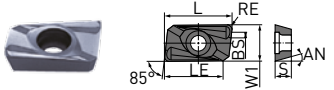
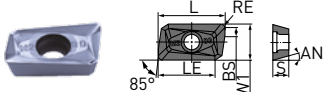
(10 inserts in one case)



MX3030 – INSERTS

P	Steel	◆	◆	Please note that the cutting conditions differ depending on multiple factors, for more details refer to the recommended cutting conditions.
M	Stainless steel	◆	◆	
K	Cast iron	◆	◆	

Edge preparation: E: Round S: Chamfer + Round T: Chamfer

Order number	Hand	Class	Edge preparation	NEW		L	LE	W1	S	BS	RE	Geometry
				MX3030	NX4545							
NEW APMT1135PDER-H1	R	M	E	★	●	11.25	9	6.35	3.5	1.5	0.4	BAP300
NEW APMT1135PDER-H2	R	M	E	★	●	11.25	9	6.35	3.5	1.2	0.8	
NEW APMT1135PDER-M2	R	M	E	★	●	11.18	9	6.35	3.5	1.2	0.8	
NEW APMT1604PDER-H2	R	M	E	★	●	17.11	14	9.525	4.76	1.4	0.8	BAP400, SRM2
NEW APMT1604PDER-M2	R	M	E	★	●	17.10	14	9.525	4.76	1.4	0.8	



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(10 inserts in one case)



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RECOMMENDED CUTTING CONDITIONS

Material	Properties	Cutter type	Inserts	Vc	ft	
						
Mild steel	≤180 HB	WSX445	L, M	180 [130 – 230]	0.15	
		ASX445	JL	180 [130 – 250]	0.15	
		ASX445	JM	180 [130 – 250]	0.2	
		ASX400	JL	180 [130 – 250]	0.15	
		ASX400	JM	180 [130 – 250]	0.18	
		OCTACUT	—	180 [100 – 250]	0.2	
		BAP	H	160 [120 – 200]	0.1	
		BRP	—	180 [130 – 250]	0.30*	
Carbon steel Alloy steel	180 – 280 HB	WSX445	L, M	150 [120 – 180]	0.15	
		ASX445	JL	150 [120 – 180]	0.15	
		ASX445	JM	150 [120 – 180]	0.2	
		ASX400	JL	150 [120 – 180]	0.13	
		ASX400	JM	150 [120 – 180]	0.15	
		OCTACUT	—	120 [80 – 160]	0.2	
		BAP	H	120 [100 – 160]	0.08	
		BRP	—	150 [120 – 180]	0.30*	
	CESP, CFSP, CGSP	—	130 [100 – 160]	0.2	0.4	
	280 – 350 HB	WSX445	L, M	150 [120 – 180]	0.15	
		ASX445	JL	100 [80 – 160]	0.15	
		ASX445	JM	100 [80 – 160]	0.2	
		ASX400	JL	100 [80 – 160]	0.1	
		ASX400	JM	100 [80 – 160]	0.13	
OCTACUT		—	100 [80 – 160]	0.2		
BAP		—	100 [80 – 160]	0.08		
BRP		—	100 [80 – 160]	0.30*		
Stainless steel	≤270 HB	WSX445	L, M	130 [100 – 180]	0.15	
		ASX445	JL	150 [120 – 180]	0.15	
		ASX445	JM	150 [120 – 180]	0.2	
		ASX400	JL	150 [120 – 180]	0.15	
		ASX400	JM	150 [120 – 180]	0.18	
		OCTACUT	—	150 [100 – 200]	0.15	
		BAP	M	120 [80 – 140]	0.1	
		BRP4	—	150 [120 – 180]	0.30*	
Cast iron Ductile cast iron	≤500 MPa	WSX445	L, M	150 [120 – 180]	0.15	
		ASX445	JL	130 [100 – 160]	0.15	
		ASX445	JM	130 [100 – 160]	0.2	
		ASX400	JL	150 [120 – 180]	0.15	
		ASX400	JM	150 [120 – 180]	0.18	
		BAP	H	100 [80 – 120]	0.1	
		BRP4	—	150 [120 – 180]	0.30*	

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* BRP is the feed amount at a depth of cut of 3 mm.

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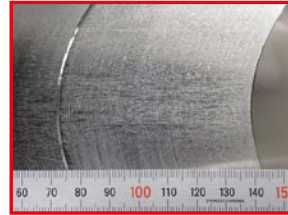
CUTTING PERFORMANCE

SURFACE FINISH COMPARISON WHEN MACHINING DIN 42CrMo4 ALLOY STEEL

The MX3030 grades produced an excellent finished surface with uniform machining marks with only a slight cloudiness.

Material	DIN 42CrMo4
Tool	ASX400-JL
Vc (m/min)	250
fz (mm/t)	0.05
ap (mm)	0.5
ae (mm)	100
Cutting mode	Dry cutting

Ra 0.5105 μm Rz 3.1582 μm



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Ra 0.5320 μm Rz 3.8950 μm



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