



# Stainless Steel

## CA6515 / CA6525

**CVD Coated Carbide**

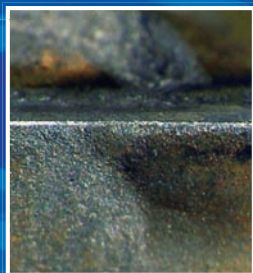


### Three Advantages

● **Minimizes Notching**

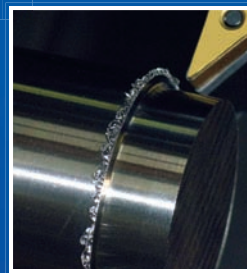


No Good Comp. A

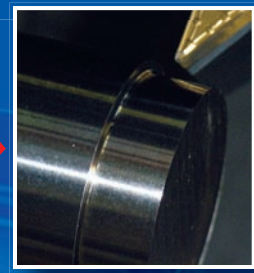


OK

● **Prevents Burrs**

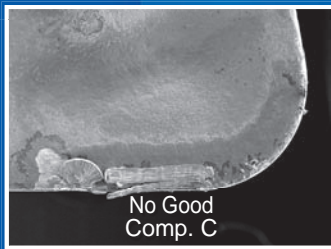


No Good Comp. B

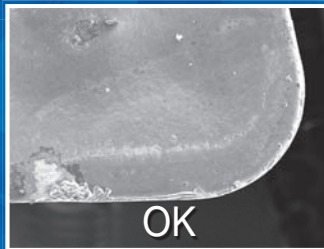


OK

● **Reduces Edge Build-up and Adhesion**





No Good Comp. C



OK



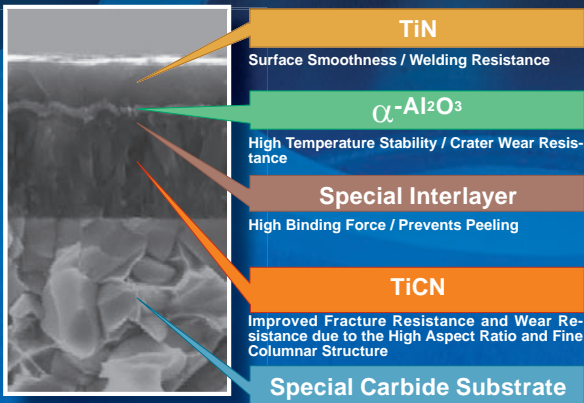
### Recommended Chipbreaker

<p><b>Chipbreaker (Geometry)</b></p>	 <p><b>MS Chipbreaker</b></p>	 <p><b>MU Chipbreaker</b></p>
<p><b>Advantages</b></p>	<ul style="list-style-type: none"> <li>• Positive land</li> <li>• Tough cutting edge</li> <li>• Good chip control</li> </ul>	<ul style="list-style-type: none"> <li>• Large rake angle</li> <li>• Low cutting resistance</li> <li>• Reduces notching &amp; burrs</li> </ul>

# CA65 Series Features

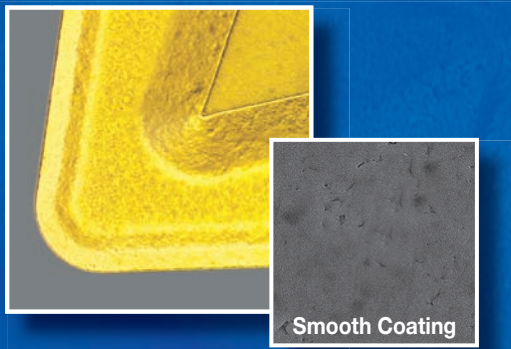
## 1 Thin Ultra Fine TiCN

- CVD coated carbide grade
- Improves wear resistance



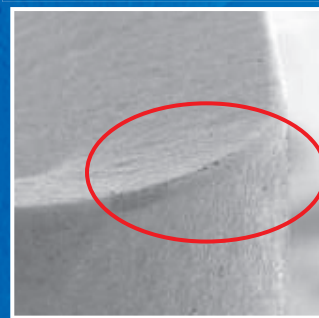
## 2 Bright Gold Coating

- Reduces edge build-up and adhesion
- Low cutting resistance



## 3 Small Edge Preparation

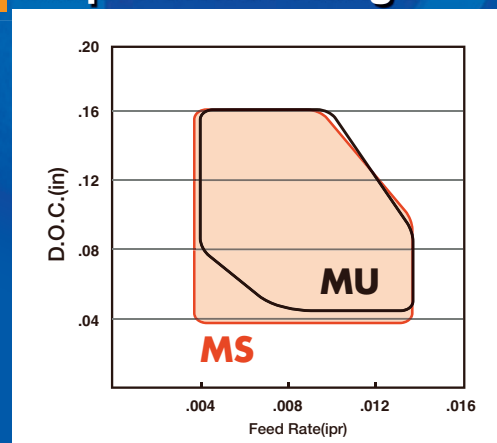
- Low cutting resistance
- Minimizes notch wear



## Application Range

Cutting Speed	High speed	CA65 <sup>15</sup>		
	Low speed	CA65 <sup>25</sup>		
Application		Continuous	Light interrupted	Heavy interrupted

## Chip Control Range



■ Case Studies

316SS	
<ul style="list-style-type: none"> <li>• Connector</li> <li>• V= 400 SFM</li> <li>• d= .08"</li> <li>• f= .008 ipr</li> <li>• WET</li> <li>• CNMG432MS (CA6525)</li> </ul>	
CA6525	
Competitor A	
<p>• Compared to competitor coated A, MS chipbreaker (CA6525) shows good chip evacuation and wear resistance, and improved the tool life by almost 300%.</p>	
Evaluation from the customer	

304SS	
<ul style="list-style-type: none"> <li>• Pin</li> <li>• V= 470 SFM</li> <li>• d= .08"</li> <li>• f= .012 ipr</li> <li>• WET</li> <li>• CNMG432MS (CA6525)</li> </ul>	
CA6525	
Competitor B	
<p>• Compared to competitor B, CA6525 demonstrated a better edge condition with longer tool life.</p> <p>• MS chipbreaker provided better chip control.</p>	
Evaluation from the customer	

440SS	
<ul style="list-style-type: none"> <li>• Housing</li> <li>• V= 410 SFM</li> <li>• d= .04" - .08"</li> <li>• f= .007 ipr</li> <li>• WET</li> <li>• CNMG432MS (CA6525)</li> </ul>	
CA6525	
Competitor C	
<p>• MS chipbreaker (CA6525) doubled the tool life of Competitor C.</p>	
Evaluation from the customer	









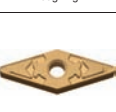
304SS	
<ul style="list-style-type: none"> <li>• Housing</li> <li>• V= 500 SFM</li> <li>• d= .04"</li> <li>• f= .010 ipr</li> <li>• WET</li> <li>• CNMG432MU (CA6515)</li> </ul>	
CA6515	
Competitor D	
<p>• Inserts are indexed when a burr forms within the hole.</p> <p>• Competitor D shows inconsistent tool life with a maximum of 15 pieces per edge. The MU chipbreaker (CA6515) consistently produces 18 pieces per edge.</p>	
Evaluation from the customer	











■ Stock Items

Shape Right-hand shown	Description (ANSI)	Corner R (Inch)	Stock Grades		
			CA 6515	CA 6525	
	CNMG 431PS	1/64	●	●	
	432PS	1/32	●	●	
	433PS	3/64	●	●	
	434PS	1/16	●	●	
	CNMG 543PS	3/64	●	●	
	544PS	1/16	●	●	
	CNMG 432PT	1/32	●	●	
	433PT	3/64	●	●	
	CNMG 542PT	543PT	1/32	●	●
		544PT	3/64	●	●
544PT		1/16	●	●	
	CNMG 431	1/64	●	●	
	432	1/32	●	●	
	433	3/64	●	●	
	CNMG 431GU	1/64	●	●	
	432GU	1/32	●	●	
	CNMG 432HU	1/64	●	●	
	433HU	1/32	●	●	
	CNMG 431MS	1/64	●	●	
	432MS	1/32	●	●	
	433MS	3/64	●	●	
	434MS	1/16	●	●	
	CNMG 431MU	1/64	●	●	
	432MU	1/32	●	●	
	433MU	3/64	●	●	
	CNMG 431TK	1/64	●	●	
	432TK	1/32	●	●	
	DNMG 431PS	1/64	●	●	
	432PS	1/32	●	●	
	433PS	3/64	●	●	
	DNMG 441PS	1/64	●	●	
	442PS	1/32	●	●	
	443PS	3/64	●	●	
	DNMG 432PT	1/32	●	●	
	433PT	3/64	●	●	
	DNMG 442PT	1/32	●	●	
	443PT	3/64	●	●	

Shape Right-hand shown	Description (ANSI)	Corner R (Inch)	Stock Grades	
			CA 6515	CA 6525
	DNMG 431GU	1/64	●	●
	432GU	1/32	●	●
	DNMG 441GU	1/64	●	●
	442GU	1/32	●	●
	DNMG 432HU	1/32	●	●
	433HU	3/64	●	●
	DNMG 442HU	1/32	●	●
	443HU	3/64	●	●
	DNMG 431MS	1/64	●	●
	432MS	1/32	●	●
	433MS	3/64	●	●
	DNMG 441MS	1/64	●	●
	442MS	1/32	●	●
	443MS	3/64	●	●
	DNMG 431MU	1/64	●	●
	432MU	1/32	●	●
	DNMG 441MU	1/64	●	●
	442MU	1/32	●	●
	DNMP 431TK	1/64	●	●
	432TK	1/32	●	●
	DNMP 441TK	1/64	●	●
	442TK	1/32	●	●
	SNMG 432PS	1/32	●	●
	433PS	3/64	●	●
	434PS	1/16	●	●
	SNMG 432PT	1/32	●	●
	433PT	3/64	●	●
	SNMG 432	1/32	●	●
	SNMG 431MS	1/64	●	●
	432MS	1/32	●	●
	433MS	3/64	●	●
	434MS	1/16	●	●

■ Stock Items

Shape Right-hand shown	Description (ANSI)	Corner R (Inch)	Stock Grades	
			CA 6515	CA 6525
 Medium-Roughing	TNMG 331PS 332PS 333PS	1/64 1/32 3/64	● ● ●	● ● ●
	TNMG 432PS 433PS	1/32 3/64	● ●	● ●
	TNMG 332PT 333PT	1/32 3/64	● ●	● ●
 Medium-Roughing	TNMG 331 332 333	1/64 1/32 3/64	● ● ●	● ● ●
 Stainless Steel Finishing	TNMG 331GU 332GU	1/64 1/32	● ●	● ●
 Stainless Steel Medium-Roughing	TNMG 332HU 333HU	1/32 3/64	● ●	● ●
 Stainless Steel Medium-Roughing	TNMG 331MS 332MS 333MS	1/64 1/32 3/64	● ● ●	● ● ●
 Stainless Steel Medium-Roughing	TNMG 331TK 332TK	1/64 1/32	● ●	● ●
 Stainless Steel Medium-Roughing	TNMG 331 <sup>R</sup> -ST 332 <sup>R</sup> -ST	1/64 1/32	● ●	● ●
 Roughing	VNMG 331 332	1/64 1/32	● ●	● ●
 Stainless Steel Finishing	VNMG 331GU 332GU	1/64 1/32	● ●	● ●

Shape Right-hand shown	Description (ANSI)	Corner R (Inch)	Stock Grades	
			CA 6515	CA 6525
 Stainless Steel Medium-Roughing	VNMG 331MS 332MS 333MS	1/64 1/32 3/64	● ● ●	● ● ●
 Stainless Steel Medium-Roughing	VNMG 331MU 332MU	1/64 1/32	● ●	● ●
 Medium-Roughing	WNMG 431PS 432PS 433PS	1/64 1/32 3/64	● ● ●	● ● ●
 Medium-Roughing	WNMG 432PT 433PT	1/32 3/64	● ●	● ●
 Roughing	WNMG 431 432 433	1/64 1/32 3/64	● ● ●	● ● ●
 Medium-Roughing	WNMG 431GU 432GU	1/64 1/32	● ●	● ●
 Stainless Steel Medium-Roughing	WNMG 432HU 433HU	1/32 3/64	● ●	● ●
 Stainless Steel Medium-Roughing	WNMG 431MS 432MS 433MS	1/64 1/32 3/64	● ● ●	● ● ●
 Stainless Steel Medium-Roughing	WNMG 431MU 432MU	1/64 1/32	● ●	● ●
 Finishing-Medium	WNMG 431TK 432TK	1/64 1/32	● ●	● ●

■ Insert Geometry

•Negative Insert

Shape	Description (ANSI)	Dimensions (Inch)			
		I.C. (A)	T	φd	α°
	CNMG43_	1/2	3/16	.203	-
	CNMG54_	5/8	1/4	.250	
	CNMG64_	3/4	1/4	.312	
	DNMG43_	1/2	3/16	.203	-
	DNMG44_	1/2	1/4	.203	
	SNMG43_	1/2	3/16	.203	-
	TNGG33_	3/8	3/16	.150	-
	TNMG33_				
	TNMG43_	1/2	3/16	.203	
	VNMG33_	3/8	3/16	.150	-
	WNMG43_	1/2	3/16	.203	-

■ Recommended Cutting Speeds

(m/min)

(SFM)

Stainless Steel	Insert Grade	
	CA6515	CA6525
Austenitic Stainless	120-240	80-220
Martensitic Stainless	125-230	95-230
Ferritic Stainless	125-230	95-230
Precipitation Hardened Stainless	50-110	40-110

Stainless Steel	Insert Grade	
	CA6515	CA6525
300 Series Stainless	400-800	270-730
400 Series Stainless	420-760	320-760
Precipitation Hardened	170-370	140-370

THE NEW VALUE FRONTIER



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