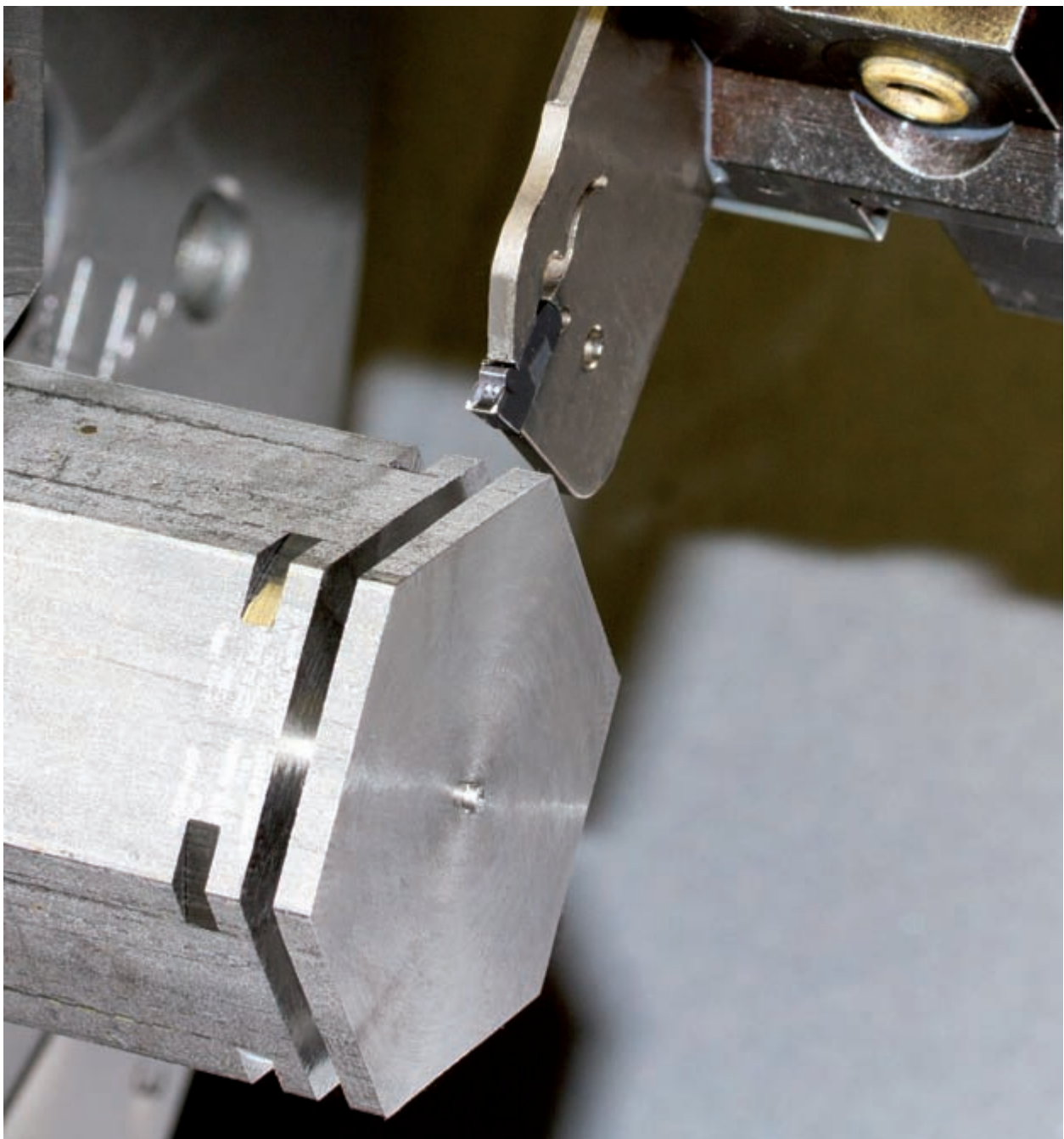


# Innovation



## HyperCoat CTPP345

When toughness is required



EN



## Application, customer benefits

### Industries

- General mechanical engineering
- Medical systems
- Food industry
- Oil industry

### Typical components

- Axles
- Tubes
- Hubs
- Pump components

### Materials

- Steel
- Stainless steel
- Super alloys



### Product advantages

### YOUR benefits

Wide application range



Versatility and flexibility  
Reduced storage

Tough carbide substrate



Suitable for interrupted cut and  
unstable situations

High cutting edge stability

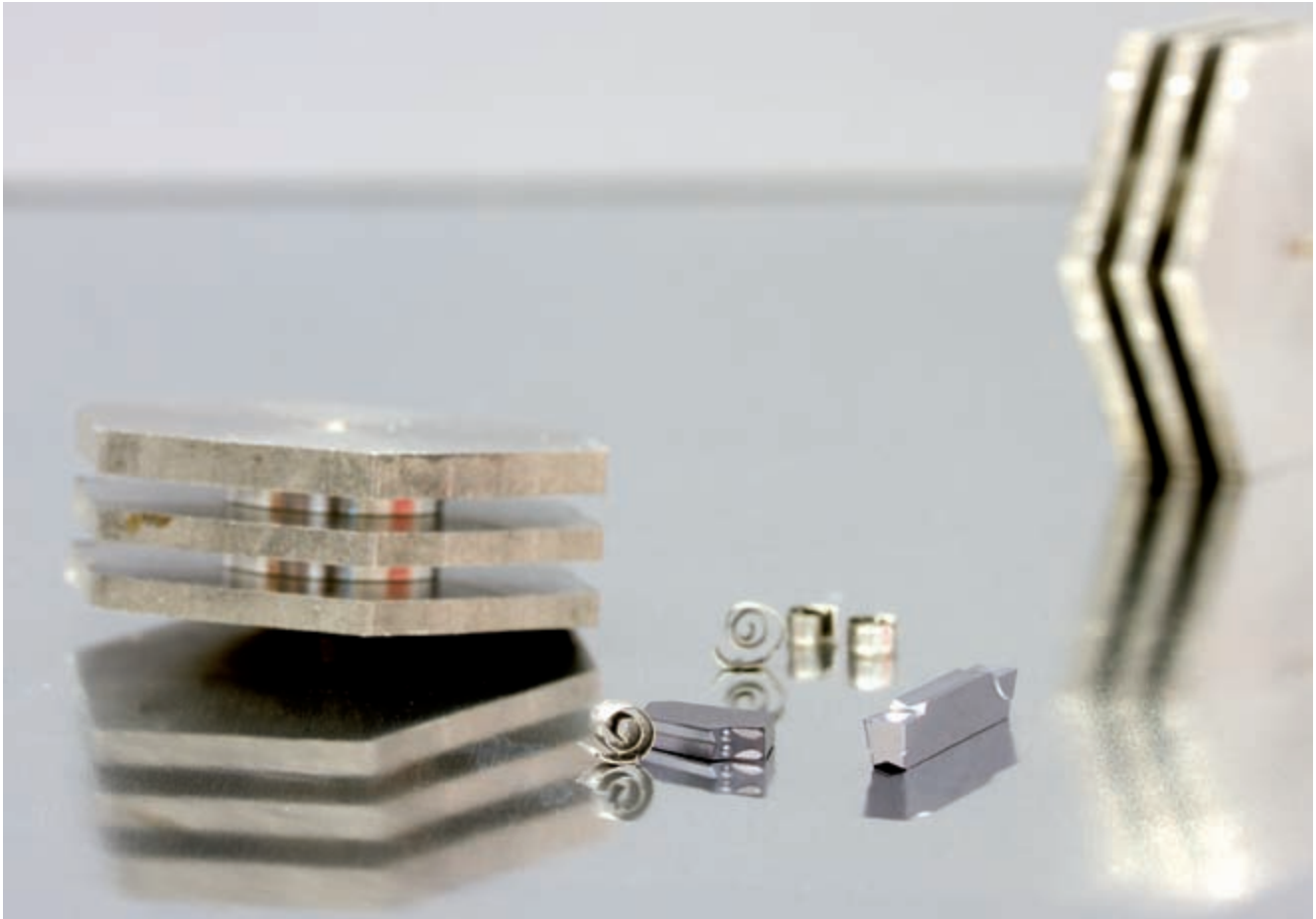


High process security  
Consistent results

Reduced tendency to adhesion



Increased tool life



CTPP345 was developed for applications where maximum toughness of the cutting edge is required.

A particularly tough substrate in combination with a recently developed and extremely wear resistant PVD TiAlN coating offers the necessary toughness and security and makes grade CTPP345 the first choice for applications such as:

- part-off to centre
- interrupted cuts
- unstable machining situations
- stainless materials and super alloys
- low cutting speed

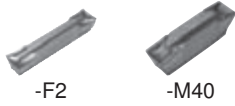
The particularly smooth surface of the PVD coating reduces the tendency to built-up edge – as occurs in stainless materials and other materials which tend towards adhesion – and thus increases tool life.

**MSS**  
see special catalogue  
'Tools and inserts for parting and grooving',  
No. 148





# Program

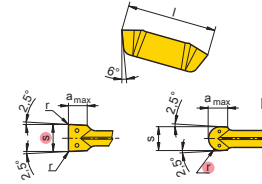


## System GX

s [mm]	Type, description		LNR	CTPP345						l [mm]	a <sub>max</sub> [mm]		
2.00	GX09-1E2.00N0.20-M40	M	N	●						9.0	1.5		
3.00	GX09-2E3.00N0.30-M40			●							2.0		
2.00	GX16-1E2.00N0.20-M40	M	N	●					16.0	2.0			
3.00	GX16-2E3.00N0.30-M40			●									3.0
4.00	GX16-3E4.00N0.40-M40			●									3.5
5.00	GX16-3E5.00N0.40-M40			●									4.0
6.00	GX16-4E6.00N0.50-M40			●									
2.00	GX24-1E2.00N0.20-M1	M	N	●					24.0	2.5			
3.00	GX24-2E3.00N0.20-M1	F		●									
	GX24-2E3.00N0.30-F2	F		●									
4.00	GX24-2E3.00N0.30-M40	M		●						3.5			
	GX24-3E4.00N0.30-M1	M		●						3.0			
5.00	GX24-3E4.00N0.40-F2	F		●						4.0			
	GX24-3E4.00N0.40-M40	M		●						3.0			
6.00	GX24-3E5.00N0.40-F2	F		●						4.0			
	GX24-3E5.00N0.40-M40	M		●						3.5			
	GX24-4E6.00N0.50-F2	F		●						4.0			
	GX24-4E6.00N0.50-M40	M		●									



Steel	●			
Stainless	●			
Cast iron	●			
Non ferrous metals	●			
Heat resistant	○			
Hard materials	●			



- Main application
- Extended application
- International CERATIZIT range, for present availability see price list

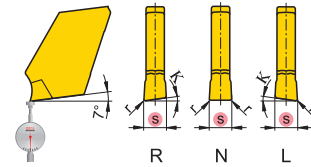


## System FX

s [mm]	Type, description		L N R	CTPP345				r [mm]	K [°]
2.20	FX 2.2R5-F1	F	R	●				0.15	5
	FX 2.2N0.10-M1	M	N	●				0.10	
	FX 2.2N0.15-F1	F		●				0.15	
	FX 2.2L5-F1	F	L	●				0.15	5
3.10	FX 3.1R5-F1	F	R	●				0.20	5
	FX 3.1R8-F1	M		●				0.20	8
	FX 3.1N0.20-F1	F	N	●				0.20	
	FX 3.1N0.40-F1	F		●				0.40	
	FX 3.1N0.40-R2	R		●				0.40	
FX 4.1N0.20-F1	F	●					0.20		
4.10	FX 4.1N0.20-M1	M	N	●				0.20	
	FX 4.1N0.50-F1	F		●				0.50	
	FX 4.1N0.50-R2	R		●				0.50	
	FX 5.1R6-M1	M		R	●				0.25
5.10	FX 5.1N0.25-M1	M	N	●				0.25	



Steel	●	●	●	●
Stainless	●	●	●	●
Cast iron	●	●	●	●
Non ferrous metals	●	●	●	●
Heat resistant	○	○	○	○
Hard materials	○	○	○	○

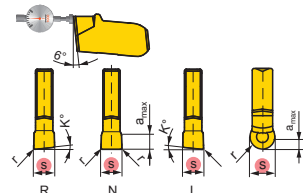


## System SX

s [mm]	Type, description		L N R	CTPP345				r [mm]	a <sub>max</sub> [mm]
2.00	SX E2.00N0.20-M1	M	N	●				0.20	
	SX E2.00N0.20-M2	M		●				0.20	1.5
3.00	SX E3.00N0.20-M1	M		●				0.20	
	SX E3.00N0.30-F2	F		●				0.30	2.0
4.00	SX E3.00N0.30-M2	M		●				0.30	2.0
	SX E4.00N0.30-M1	M		●				0.30	
	SX E4.00N0.40-M2	M	●				0.40	2.5	



Steel	●	●	●	●
Stainless	●	●	●	●
Cast iron	●	●	●	●
Non ferrous metals	●	●	●	●
Heat resistant	○	○	○	○
Hard materials	○	○	○	○



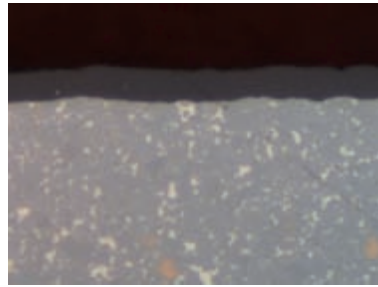
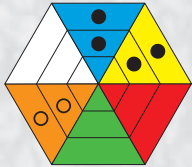
- Main application
- Extended application
- International CERATIZIT range, for present availability see price list



# Grade description, cutting data

## CTPP345

HC-P45  
HC-M40  
HC-S40



### Composition:

Co 12.5%; mixed carbides 2.0%; WC balance

### Grain size:

1 - 1.5  $\mu\text{m}$

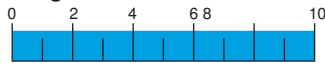
### Hardness:

HV<sub>30</sub> 1380

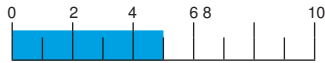
### Coating specification:

TiAlN; 7  $\mu\text{m}$

### Toughness



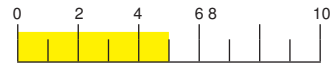
### Wear resistance



### Toughness



### Wear resistance



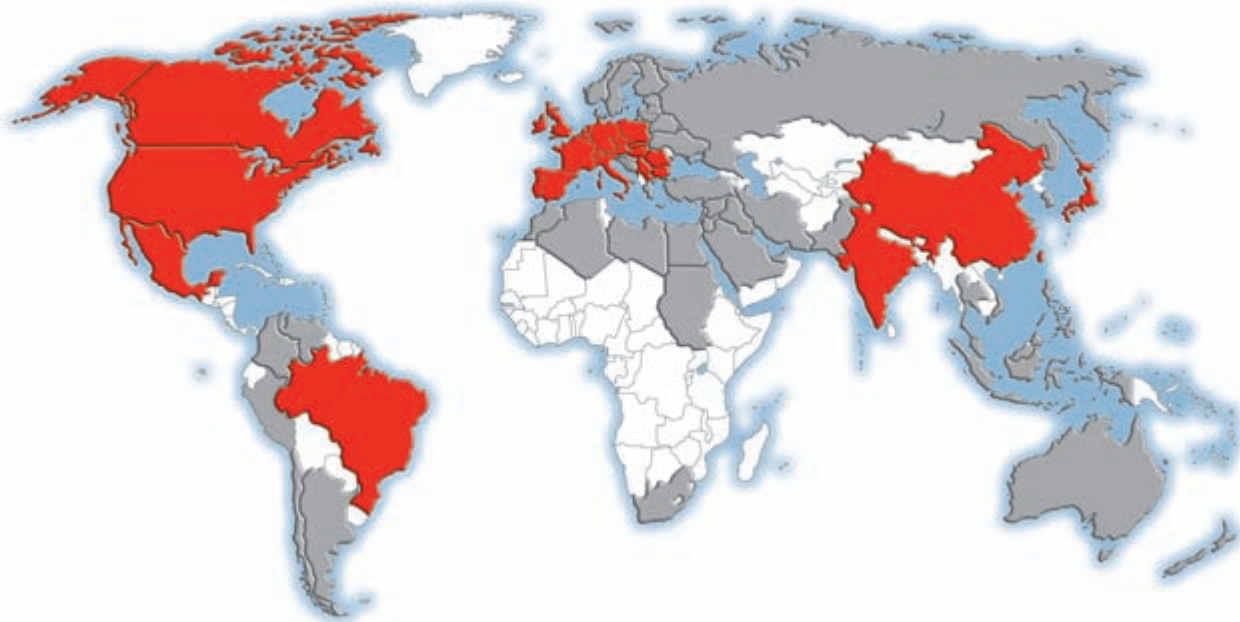
### Properties, application:

- For universal application
- Excellent toughness
- Good wear resistance
- High application security

Work piece material	Type of treatment / alloy		VDI 3323 group	Hardness HB	CTPP345 v <sub>c</sub> [m/min]	
A Non alloyed steel	annealed	≤ 0.15% C	1	125	110 - 190	
		.15% - .45% C	2	150 - 250	80 - 150	
		≥ .45% C	3	300	70 - 140	
	Low alloyed steel	annealed		6	180	70 - 140
		tempered		7 / 8	250 - 300	70 - 120
		tempered		9	350	60 - 120
	High alloyed steel	annealed		10	200	60 - 100
		tempered		11	350	60 - 100
	Corrosion resistant steel	annealed	ferritic	12	200	90 - 160
		tempered	martensitic	13	325	60 - 100
R Stainless steel	annealed	ferritic / martensitic	14	200	100 - 180	
	quenched	austenitic	14	180	80 - 150	
	quenched	duplex	14	230 - 260	70 - 110	
	hardened	martensitic / austenitic	14	330	60 - 90	
S Heat resistant alloys	annealed	Fe-base	31	200	—	
	hardened	Fe-base	32	280	20 - 40	
	annealed	Ni or Co-base	33	250	20 - 30	
	hardened	Ni or Co-base 30 - 58 HRC	34	—	—	
	cast	Ni or Co-base 1500 - 2200 N/mm <sup>2</sup>	35	—	—	
Titanium alloys		pure titanium	36	R <sub>m</sub> 440*	—	
		alpha + beta alloys	37	R <sub>m</sub> 1050*	—	



## CERATIZIT worldwide



- CERATIZIT worldwide production sites and support centres
- CERATIZIT worldwide distribution partner network



[www.ceratizit.com](http://www.ceratizit.com)

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