HARVEY TOOL

Speeds & Feeds

Product Table: High Helix End Mills for Aluminum Alloys - 45° Helix - Square
Characteristics: 3x,4x Length of Cut, 2 Flutes
Series: 241xx, 242xx, 7896xx, 241xx-C7, 242xx-C7, 241xx-C8, 242xx-C8, 7896xx-C8

Cutter Series	MATERIAL	SFM	Chip Load Per Tooth (IPT) By Cutter Diameter									Depth of Cut	
				0.015	0.031	0.047	0.062	0.078	0.093	0.125	0.187	0.250	Radial	Axial
Uncoated	**ALUMINUM ALLOYS**													
	Casting (2xx, 5xx, 7xx, 8xx)	750	Slotting	.00015	.00031	.00047	.00062	.00078	.00093	.00125	.00187	.00250	1x Dia	.5x Dia
	Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1000												
	MAGNESIUM ALLOYS	1500												
	ZINC ALLOYS	800												
	COPPER ALLOYS													
	High Coppers - 90%+ (C1xxxx)	225												
	Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800)	500	Roughing	.00018	.00037	.00056	.00074	.00094	.00112	.00150	.00224	.00300	.5x Dia	.5x-1x Dia
	Phosphor Bronzes (Copper Tin alloys, C5xxxx)	225												
	Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	500												
	Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	500												
	Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	225	Finishing	.00012	.00025	.00038	.00050	.00062	.00074	.00100	.00150	.00200	.1x Dia	1x-3x Dia
	Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	550												
TiB2	**ALUMINUM ALLOYS**													
	Casting (2xx, 5xx, 7xx, 8xx)	1000	Slotting	.00019	.00039	.00059	.00078	.00098	.00116	.00156	.00234	.00313	1x Dia	.5x Dia
	Wrought (1xxx, 2xxx, 3xxx, 5xxx, 6xxx, 7xxx, 8xxx)	1400												
	MAGNESIUM ALLOYS	2000	Roughing	.00020	.00042	.00063	.00084	.00105	.00126	.00169	.00252	.00338	.5x Dia	.5x-1x Dia
	ZINC ALLOYS	1100	Finishing	.00015	.00031	.00047	.00062	.00078	.00093	.00125	.00187	.00250	.1x Dia	1x-3x Dia
ZrN	**ALUMINUM (High Silicon)**													
	Casting - 3%-5% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	2500	Slotting	.00019	.00039	.00059	.00078	.00098	.00116	.00156	.00234	.00313	1x Dia	.5x Dia
	Casting - 5%-8% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	2000												
	Casting - 8%-12% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	1500												
	Casting - 12%-16% Si (3xx, A3xx, C3xx, 4xx, A4xx, B4xx)	1000												
	Wrought - 5%-8% Si (4xxx)	2200	Roughing	.00020	.00042	.00063	.00084	.00105	.00126	.00169	.00252	.00338	.5x Dia	.5x-1x Dia
	Wrought - 8%-12% Si (4xxx)	1700												
	COPPER ALLOYS													
	High Coppers - 90%+ (C1xxxx)	800												
	Brass (Copper Zinc alloys, C2xxxx, C3xxxx, C4xxxx, C66400-C69800)	1500												
	Phosphor Bronzes (Copper Tin alloys, C5xxxx)	800												
	Aluminum Bronzes (Copper Aluminum alloys, C60600-C64200)	1000												
	Silicon Bronzes (Copper Silicon alloys, C64700-C66100)	1000												
	Copper Nickels, Nickel Silvers (Copper Nickel alloys, C7xxxx)	800												
	Cast Copper Alloys (C80100-C82800, C86300, C90200-C91700, C96200-C96600, C99300)	150	Finishing	.00015	.00031	.00047	.00062	.00078	.00093	.00125	.00187	.00250	.1x Dia	1x-3x Dia
	Cast Copper Alloys (C83300-C86200, C86400-C87900, C92200-C95800, C97300-C97800, C99400-C99700)	750												

Please note:

All posted speed and feed parameters are suggested starting values that may be increased given optimal setup conditions. If less than minimum Axial or Radial DOC values are used, increased feed rates are possible. If greater than maximum Axial or Radial DOC values are used, decreased feed rates may be needed.