

GARR TOOL Aluminum Series 3-Flute Drill Application Guide

Fractional

CHIPLOAD PER FLUTE (Fz)								
Material	Type	SFM	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
Aluminum Alloy	6061	450 - 650	.0020" - .0040"	.0025" - .0050"	.0035" - .0060"	.0045" - .0070"	.0055" - .0080"	.0065" - .0100"
Cast Aluminum	380	300 - 500	.0015" - .0030"	.0020" - .0040"	.0030" - .0050"	.0030" - .0060"	.0035" - .0070"	.0040" - .0080"
Magnesium		250 - 500	.0015" - .0030"	.0020" - .0040"	.0030" - .0050"	.0030" - .0060"	.0035" - .0070"	.0040" - .0080"
Copper & Brass		250 - 400	.0010" - .0025"	.0020" - .0030"	.0020" - .0030"	.0020" - .0040"	.0030" - .0050"	.0030" - .0060"
Titanium	6Al-4V	100 - 300	.0010" - .0020"	.0020" - .0030"	.0020" - .0030"	.0020" - .0040"	.0030" - .0050"	.0030" - .0060"

Metric

CHIPLOAD PER FLUTE (Fz)								
Material	Type	M/Min.	4.0	6.0	8.0	10.0	12.0	16.0
Aluminum Alloy	6061	180 - 240	.050 - .100	.065 - .125	.090 - .150	.115 - .175	.150 - .200	.165 - .250
Cast Aluminum	380	135 - 180	.050 - .100	.100 - .125	.100 - .150	.125 - .175	.150 - .200	.100 - .200
Magnesium		120 - 180	.038 - .075	.050 - .100	.075 - .125	.075 - .150	.090 - .175	.100 - .200
Copper & Brass		120 - 180	.025 - .060	.050 - .075	.050 - .075	.050 - .100	.075 - .125	.075 - .150
Titanium	6Al-4V	30 - 90	.025 - .050	.050 - .075	.050 - .075	.050 - .100	.075 - .125	.075 - .150

PHYSICAL PROPERTIES AND CHARACTERISTICS OF ALUMASTAR COATING	
Property/Characteristic	Description
Nomenclature	TiB ₂
Color	Silver
Hardness	4000 Hv
Coating Thickness	1-2 μm
Thermal Stability	850° C (1562° F)
Deposition Temperature	450° C (842° F)
Applications	Aluminum, AlSi Alloys (<12% Si), Magnesium, Copper, Titanium Alloys, Non-ferrous

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.