GARR TOOL Aluminum Series Drill Application Guide

Fractional

CHIPLOAD PER FLUTE (Fz)								
Material	Type	SFM	3/16" (.1875")	1/4" (.2500")	5/16" (.3125")	3/8" (.3750")	1/2" (.5000")	5/8" (.6250")
Aluminum Alloy	6061	600 - 800	.002" - .004"	.004" - .005"	.004" - .006"	.005" - .007"	.006" - .008"	.007" - .010"
Cast Aluminum	380	450 - 600	.002" - .004"	.004" - .005"	.004" - .006"	.005" - .007"	.006" - .008"	.007" - .010"
Magnesium		400 - 600	.002" - .004"	.004" - .005"	.004" - .006"	.005" - .007"	.006" - .008"	.007" - .010"
Copper & Brass		400 - 600	.001" - .002"	.002" - .003"	.002" - .003"	.002" - .004"	.003" - .005"	.003" - .006"
Titanium	6Al-4V	100 - 300	.001" - .002"	.002" - .003"	.002" - .003"	.002" - .004"	.003" - .005"	.003" - .006"

Metric

CHIPLOAD PER FLUTE (Fz)								
Material	Type	M/Min.	4,0 (0,1575")	6,0 (0,2362")	8,0 (0,3150")	10,0 (0,3937")	12,0 (0,4724")	16,0 (0,6299")
Aluminum Alloy	6061	180 - 240	0,050 - 0,100	0,100 - 0,125	0,100 - 0,150	0,125 - 0,175	0,150 - 0,200	0,175 - 0,250
Cast Aluminum	380	135 - 180	0,050 - 0,100	0,100 - 0,125	0,100 - 0,150	0,125 - 0,175	0,150 - 0,200	0,175 - 0,250
Magnesium		120 - 180	0,050 - 0,100	0,100 - 0,125	0,100 - 0,150	0,125 - 0,175	0,150 - 0,200	0,175 - 0,250
Copper & Brass		120 - 180	0,025 - 0,050	0,050 - 0,075	0,050 - 0,075	0,050 - 0,100	0,075 - 0,125	0,075 - 0,150
Titanium	6Al-4V	30 - 90	0,025 - 0,050	0,050 - 0,075	0,050 - 0,075	0,050 - 0,100	0,075 - 0,125	0,075 - 0,150

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.