SSP

Solid Surface Cutting Data Recommendations

DEPTH OF CUT: 1 x D Use recommended chip load
2 x D Reduce chip load by 25%
3 x D Reduce chip load by 50%

Recommended Chip Load per Tooth by Cutting Diameter (in)

Series	Cut	1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
37-50	1 x D					.003-.006		.003-.006		.003-.006							
37-60	1 x D									.004-.006		.004-.006			.006-.008		.008 -.010
52-000	1 x D			.003-.006		.003-.006		.004-.006		.008-.010		.012-.014					
52-200B/BL	1 x D	.002-.004		.002-.004		.002-.004		.004-.006		.004-.006		.006-.008		.008-.010	.010-.012		
52-600	1 x D							.004-.006		.006-.008		.008-.010		.008-.010	.010-.012		
52-700	1 x D			.002-.004		.003-.005		.004-.006		.005-.007		.006-.008		.007-.009	.008-.010		.009-.011
56-000P	1 x D			.002-.004		.002-.004		.004-.006		.006-.008		.008-.010					
56-450	1 x D			.002-.004		.002-.004		.003-.005		.004-.006		.005-.007					
57-000	1 x D			.002-.004		.002-.004		.003-.005		.004-.006		.005-.007					
57-600	1 x D							.004-.006		.006-.008		.008-.010		.008-.010	.010-.012		
60-200	1 x D							.002-.004		.002-.006		.002-.006		.004-.008			
62-700	1 x D			.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
62-750	1 x D			.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
62-800	1 x D			.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
62-850	1 x D			.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
63-700	1 x D	.002-.003		.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
63-750	1 x D	.002-.003		.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
63-800	1 x D	.002-.003		.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
63-850	1 x D	.002-.003		.002-.004		.004-.006		.006-.010		.006-.010		.010-.012					
64-000/ 65-000	1 x D	.002-.004		.006-.008		.008-.010	.010-.012	.010-.012		.010-.012							
66-000	1 x D							.002-.004		.003-.005		.004-.006					

FORMULAS: Chip Load = Feed Rate / (RPM x # of cutting edges)
Feed Rate (IPM) = RPM x # of cutting edges x chip load
Speed (RPM) = Feed Rate / (# of cutting edges x chip load)

DEFINITIONS: IPM = Inches Per Minute

D Drill Cutting Data Recommendations

Recommended Chip Load per Tooth by Cutting Diameter (in)																	
Series		SFM	3	1/8	3/16	5	6	1/4	5/16	8	3/8	7/16	1/2	5/8	3/4	7/8	1
67-800	Composites	230		.001-.003	.001-.003			.002-.004	.002-.004		.003-.005	.003-.005	.003-.005				
68-900	Composites	230		.001				.0015			.0015		.0015				
70-500	Plastic	200		.019-.021				.021-.023			.023-.025		.025-.027				
72-000*	Wood		.009-.011			.011-.013	.013-.015			.015-.017							
85-800	Composites	230		.0005	.0005			.001	.001		.0015		.001				
86-150	Composites	150-250		.001	.001			.0015			.0015		.0015				

* Gang drills run at 4,500 RPM and 150 IPM

FORMULAS: RPM = (3.82 x SFM) / tool dia.
Feedrate (IPM) = RPM x IPR

DEFINITIONS:
IPM = Inches Per Minute
IPR = Inches Per Revolution

F Foam Cutting Data Recommendations

DEPTH OF CUT: 1 x D Use recommended chip load
2 x D Reduce chip load by 25%
3 x D Reduce chip load by 50%

Recommended Chip Load per Tooth by Cutting Diameter (in)																						
Series	Cut	1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	2
40-550	1 x D											.004-.006										
48-000	1 x D			.002-.004		.002-.004		.003-.005	.003-.005	.004-.006		.005-.007		.006-.008	.007-.009		0.010					
52-550	1 x D			.002-.004		.002-.004		.004-.006	.004-.006	.004-.006												
52-700	1 x D			.002-.004		.002-.004		.004-.006	.004-.006	.004-.006		.005-.007		.006-.008	.007-.009		0.010					
56-000P	1 x D			.002-.004		.002-.004		.004-.006		.004-.006		.005-.007										
77-100	1 x D			.002-.004				.004-.006														

29-000

HONEYCOMB CORE	ALUMINUM		NOMEX		PAPER	
Part #	RPM	Feed Rate	RPM	Feed Rate	RPM	Feed Rate
29-003 (1/4")	500-4,000	100 IPM	500-10,000	120 IPM	500-10,000	120 IPM
29-006 (3/8")	500-4,000	100 IPM	500-10,000	120 IPM	500-10,000	120 IPM
29-009 (1/2")	500-4,000	100 IPM	500-10,000	120 IPM	500-10,000	120 IPM
29-012 (5/8")	500-4,000	100 IPM	500-10,000	120 IPM	500-10,000	120 IPM
29-015 (3/4")	500-4,000	100 IPM	500-10,000	120 IPM	500-10,000	120 IPM

29-050

SPINDLE SPEED			CORE TYPE		SPINDLE SPEED	
DIA	Max RPM	Feed Rate		Max Feed Rate	Max RPM	DIA
1/4	25,000	NR	Aluminum, less than 5#/cuft	100	25,000	1/4
3/8	25,000	NR	Aluminum, more than 5#/cuft	100	25,000	3/8
1/2	25,000	800	Paper based	400	25,000	1/2
3/4	25,000	800	Paper based w/Fiber Reinforcement	800	25,000	3/4
1	25,000	800	Fiberglass	600		
1-1/2	18,000	800	Phenolic	600		
1-3/4	18,000	NR	Carbon Fiber	800		
2	16,500	100	Aramid, less than 5#/cuft	800		
2-1/2	15,000	100	Aramid, more than 5#/cuft	800		
3	14,000					
4	12,000					

29-100

30-000/ 30-300 30-700 32-200

SPEEDS & FEEDS	FEED RATES				SPINDLE SPEED	
Core Type	Solid Carbide	Solid Carbide w/Teeth	Diamond Saw	HSS	DIA	MAX RPM
Aluminum, less than 5#/cuft	100	100	NR	150	1/4	25,000
Aluminum, more than 5#/cuft	100	100	NR	100	3/8	25,000
Paper based	400	400	NR	250	1/2	25,000
Paper based with Fiber Reinforcement	800	800	400	150	3/4	25,000
Fiberglass	600	600	600	NR	1	25,000
Phenolic	200	200	400	NR	1-1/2	18,000
Carbon Fiber	NR	NR	800	NR	1-3/4	18,000
Aramid, less than 5#/cuft	800	800	400	150	2	16,500
Aramid, more than 5#/cuft	800	800	400	NR	2-1/2	15,000
					3	14,000
					4	12,000

Note: 30-300 assembly requires one (1) hogger and one (1) blade

31-000/ 32-000

SPEEDS & FEEDS	FEED RATES						SPINDLE SPEED	
Core Type	Solid Carbide	Diamond Carbide	HSS Saw	HSS Wavy	HSS (31-000)	HSS (31-100)	DIA	MAX RPM
Aluminum, less than 5#/cuft	100	NR	150	100	100-140	90-140	3/8	25,000
Aluminum, more than 5#/cuft	100	NR	100	100	70	70	1/2	25,000
Paper based	300	NR	200	300	50	50	3/4	25,000
Paper based w/Fiber Reinforcement	400	300	600	300	100-150	100-150	1	25,000
Fiberglass	NR	600	NR	NR	NR	NR	1-1/2	25,000
Phenolic	NR	600	NR	NR	NR	NR	1-3/4	25,000
Carbon Fiber	NR	800	NR	NR	NR	NR	2	18,000
Aramid, less than 5#/cuft	200	NR	150	200	100-150	100-150	2-1/2	18,000
Aramid, more than 5#/cuft	200	400	NR	NR	NR	NR	3	18,000

34-000

CORE TYPE	CUTTER	RPM	FEED RATE	CUT DIRECTION
Fiberglass panels with paper core (Nomex®)	Diamond Grit	18,000	220 lpm	Conventional
Aluminum panels with aluminum core	HSS Saw	16,000	120 lpm	Conventional