



MANMAT

Sure-Score Creasing Matrix – Channel Width & Rule Height Selection

6pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)							CALCULATED CHANNEL WIDTH
	1.30	1.40	1.50	1.60	1.70	1.80	1.90	
BLACK 5.0MM	4.73	4.93	5.13					
CREAM 6.0MM				5.33	5.53	5.73	5.93	6.13

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)								CALCULATED CREAMING RULE HEIGHT
	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	
23.8MM	22.25	22.15	22.05	21.95	21.85	21.8	21.7	21.55	
23.3MM	21.75	21.65	21.55	21.45	21.35	21.3	21.2	21.05	
22.3MM									

4pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)														CALCULATED CHANNEL WIDTH		
	0.75	0.80	0.85	0.90	0.95	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80		1.90	2.00
ORANGE 3.0MM	2.92	3.02	3.12														
OLIVE 3.2MM			3.12	3.22	3.32												
SPEARMINT 3.4MM				3.32	3.42	3.62											
GREY 3.8MM						3.62	3.82	4.02									
BLACK 5.0MM									4.22	4.42	4.62	4.82	5.02				
CREAM 6.0MM														5.22	5.42		

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)														CALCULATED CREAMING RULE HEIGHT		
	0.75	0.80	0.85	0.90	0.95	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80		1.90	2.00
23.8MM	22.80	22.75	22.70	22.65	22.60	22.55	22.45	22.35	22.25	22.15	22.05	21.95	21.85	21.75	21.65	21.55	
23.3MM	22.30	22.25	22.20	22.15	22.10	22.05	21.95	21.85	21.75	21.65	21.55	21.45	21.35	21.25	21.15	21.05	
22.3MM																	

3pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)															CALCULATED CHANNEL WIDTH		
	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1.00	1.1	1.2	1.3		1.4	1.5
SLATE 1.9MM	1.97																	
GREEN 2.0MM	1.97	2.07																
BROWN 2.1MM	1.97	2.07	2.17															
PEACH 2.2MM		2.07	2.17	2.27														
RED 2.3MM			2.17	2.27	2.37													
BLACK 2.4MM				2.27	2.37	2.47												
AQUA 2.5MM					2.37	2.47	2.57											
BLUE 2.6MM						2.47	2.57	2.67										
Bronze 2.8MM								2.67	2.77	2.87								
ORANGE 3.0MM									2.87	2.97	3.07							
OLIVE 3.2MM											3.07	3.27	3.47					
SPEARMINT 3.4MM												3.27	3.47	3.67				
GREY 3.8MM													3.67	3.87	4.07			

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)															CALCULATED CREAMING RULE HEIGHT		
	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1.00	1.1	1.2	1.3		1.4	1.5
23.8MM	23.10	23.05	23.00	22.95	22.90	22.85	22.80	22.75	22.70	22.65	22.60	22.55	22.45	22.35	22.25	22.15	22.05	
23.3MM	22.60	22.55	22.50	22.45	22.40	22.35	22.30	22.25	22.20	22.15	22.10	22.05	21.95	21.85	21.75	21.65	21.55	
22.3MM	21.60	21.55																

2pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)													CALCULATED CHANNEL WIDTH
	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	
BUFF 1.0MM	1.01	1.11												
NAVY 1.1MM	1.01	1.11	1.21											
VIOLET 1.2MM		1.11	1.21	1.31										
WHITE 1.3MM			1.21	1.31	1.41									
SKY 1.4MM				1.31	1.41	1.51								
LIME 1.5MM					1.41	1.51	1.61							
YELLOW 1.6MM						1.51	1.61	1.71						
ROSE 1.7MM							1.61	1.71	1.81					
BURGUNDY 1.8MM								1.71	1.81	1.91				
SLATE 1.9MM									1.81	1.91	2.01			
GREEN 2.0MM										1.91	2.01	2.11		
BROWN 2.1MM											2.01	2.11	2.21	

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)													CALCULATED CREAMING RULE HEIGHT
	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	
23.8MM	23.40	23.35	23.30	23.25	23.20	23.15	23.10	23.05	23.00	22.95	22.90	22.85	22.80	
23.3MM	22.90	22.85	22.80	22.75	22.70	22.65	22.60	22.55	22.50	22.45	22.40	22.35	22.30	
22.3MM	21.90	21.85	21.80	21.75	21.70	21.65	21.60	21.55						

1½pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)				
	0.10	0.15	0.20	0.25	0.30
SILVER 0.8MM	0.74	0.84	0.94		
DUSK 0.9MM		0.84	0.94	1.04	
BUFF 1.0MM			0.94	1.04	1.14

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)				
	0.10	0.15	0.20	0.25	0.30
23.8MM	23.45	23.40	23.35	23.30	23.25
23.3MM	22.95	22.90	22.85	22.80	22.75
22.3MM	21.95	21.90	21.85	21.80	21.75

1pt Creasing Rule

REFERENCE	BOARD THICKNESS (MM)				
	0.05	0.10	0.15	0.20	0.25
MAUVE 0.5MM	0.46	0.56	0.66		
SILVER 0.8MM			0.66	0.76	0.86
DUSK 0.9MM					0.86

CUTTING RULE HEIGHT	BOARD THICKNESS (MM)				
	0.05	0.10	0.15	0.20	0.25
23.8MM	23.50	23.45	23.40	23.35	23.30
23.3MM	23.00	22.95	22.90	22.85	22.80
22.3MM	22.00	21.95	21.90	21.85	21.80

Determining the correct channel width

THE CORRECT SIZE CHANNEL WIDTH FOR CREASING SOLID BOARD IS CALCULATED AS FOLLOWS:

$$2 \times \text{BOARD THICKNESS} + \text{CREASING RULE THICKNESS} = \text{CHANNEL WIDTH}$$

FOR EXAMPLE:

$$\text{BOARD THICKNESS} = 450 \text{ MICRONS (0.45MM)}$$

$$\text{CREASING RULE WIDTH} = 2\text{PT (0.71MM)}$$

$$(2 \times 0.45) + 0.71 = \text{CHANNEL WIDTH}$$

$$0.9 + 0.71 = 1.61\text{MM}$$

AS THEORETICAL CHANNEL WIDTH = 1.61, CHECK AVAILABLE RANGE OF MATRIX AND SELECT CLOSEST MATCH. IN THIS CASE THE NEAREST SURE-SCORE MATRIX IS YELLOW 60, A CHANNEL WIDTH OF 1.60MM

WHEN DETERMINING THE CORRECT CHANNEL WIDTH FOR CORRUGATED BOARDS, THE SAME RULES APPLY, HOWEVER THE COMPRESSED THICKNESS OF THE CORRUGATED SHOULD BE USED.

IT IS STRONGLY RECOMMENDED TO INCREASE THE CHANNEL WIDTH BY AT LEAST 0.1MM FROM THE CALCULATED SIZE FOR CROSS GRAIN CREASING, PARTICULARLY WHEN CREASING BRITTLE, COARSE FIBRE BOARDS. WITHIN THE SURE-SCORE CREASING MATRIX SYSTEM, THERE ARE MANY STEPS OF 0.1MM SPECIALLY FOR LONG GRAIN/ CROSS GRAIN CREASING.

Determining the correct Creasing/ Cutting Rule heights

THE DIFFERENCE BETWEEN THE CUTTING RULE HEIGHT AND THE CREASING RULE HEIGHT MUST INCLUDE AN ALLOWANCE OF 0.25MM (0.01") FOR THE THICKNESS OF THE STEEL MATRIX BASE AND PRESSURE SENSITIVE ADHESIVE. THIS IS DETERMINED AS FOLLOWS:

$$\text{CUTTING RULE} - \text{BOARD THICKNESS} - \text{BASE ALLOWANCE} = \text{CREASING RULE HEIGHT}$$

FOR EXAMPLE:

$$\text{CUTTING RULE HEIGHT} = 23.8\text{MM}$$

$$\text{BOARD THICKNESS} = 0.45\text{MM}$$

$$\text{BASE ALLOWANCE (CONSTANT)} = 0.25\text{MM}$$

$$23.80 - 0.45 - 0.25 = 23.10\text{MM CREASING RULE HEIGHT}$$

A CREASING RULE UNDERHEIGHT IS ALWAYS PREFERABLE TO OVERHEIGHT.

AN UNDERHEIGHT CREASING RULE CAN ALWAYS BE ADJUSTED USING SURE-SHIM PATCH TAPE

REMEMBER: **ADJUST OR SPECIFY THE CREASING RULE HEIGHT VARIANCE FOR THE BOARD**

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