

ASD METAL LAMINATES; less than 2 mm , or 2 mm and greater thickness ,according to EN 438-8,consisting of the surface material of which consists of a thin layer of metal, and a core made of layers of kraft paper impregnated with phenolic based resins.

They are available the types MTS,MTP,MCS

ATS	Pearlescent Standard Grade Thin Laminate (< 2 mm)
ATP	Pearlescent Postforming Grade Thin Laminate (< 2 mm)
ACS	Pearlescent Standard Grade Compact Laminate

PROPERTIES	TEST METHOD	PROPERTY OR ATTRIBUTE	UNIT (max or min)	VALUES		
				ATS	ATP	ACS

SURFACE QUALITY

Surface Quality	EN 438-8	Spots, dirt and similar surface defects	mm ² /m ²	≤1		
		Fibres, hairs and scratches	mm/m ²	≤10		

DIMENSIONAL TOLERANCES

Dimensional Tolerances	EN 438-2.5	Thickness tolerances	mm	0,5≤t≤1 : +/-0,15	2,0≤t<3,0:±0,25	
			mm	1,0<t<2,0 : +/-0,18	3,0≤t<5,0:±0,40	
			mm	-	5,0≤t<8,0:±0,50	
			mm	-	8,0≤t<12,0:±0,70	
			mm	-	12,0≤t<16,0:±0,80	
			mm	-	16,0≤t<20,0:±0,90	
			mm	-	20,0≤t<25,0:±1,00	
	EN 438-2.6	Lenght and width	mm	+10/-0		
	EN 438-2.7	Straightness of edges	mm/m	≤1,5		
	EN 438-2.8	Squareness	mm/m	≤1,5		
	EN 438-2.9	Flatness	mm/m	≤ 100	2,0≤t<6,0:≤8,0	
			mm/m		6,0≤t<10:≤5,0	
			mm/m		10,0≤t: 3,0	

GENERAL PROPERTIES

Resistance to immersion in boiling water	EN 438-2.12	Core Delamination	Pass or fail	Pass		
Resistance to water vapour	EN 438-2.14	Appearance	Rating (min)	3		
Dimensional stability at elevated temperature	EN 438-2.17	Cumulative dimensional change t<2 mm	Longitudinal %	≤ 0,75	≤ 0,75	-
		Cumulative dimensional change t<2 mm	Transversal %	≤ 1,25	≤ 1,25	-
		Cumulative dimensional change 2≤t<5 mm	Longitudinal %	-	-	≤ 0,4
		Cumulative dimensional change 2≤t<5 mm	Transversal %	-	-	≤ 0,8
		Cumulative dimensional change t≥5	Longitudinal %	-	-	≤ 0,3
		Cumulative dimensional change t≥5	Transversal %	-	-	≤ 0,6
Resistance to cracking under stress	EN 438-2.23	Appearance	Rating (min)	4	4	-
Resistance to crazing	EN 438-2.24	Appearance	Rating (min)	-	-	4
Resistance to scratching	EN 438-2.25	Appearance	Rating (min)	1		
Resistance to staining	EN 438-2.26	Appearance Group 1&2	Rating (min)	4		
		Appearance Group 3	Rating (min)	4		
Light fastness (xenon arc)	EN 438-2.27	Contrast	Grey scale rating (min)	4		
Flexural Strength	EN ISO 178	Stress	Mpa (min)	-	-	80
Flexural Modulus	EN ISO 178	Stress	Mpa (min)	-	-	9000
Density	EN ISO 1183-1	Density	g/cm ³	≥ 1,35		