

Laminum®/ M-Tech®L - Laminated Shim Stock
Material Specification (*4)



Material	Description			Layer thickness [mm]					Format l x b [mm]	Total thickness (*3)																				
	Numeric	Chemical	U.S.A.	0,025	0,050	0,075	0,100	0,200		[mm]	0,5	0,8	1,0	1,2	1,5	1,6	2,0	2,4	2,5	3,0	3,2									
ALUMINIUM <i>Discontinued material! Aluminium EN AW-AI99,5 replaced by Aluminium alloy EN AW-AIMg2,5!</i>	EN AW-1050A	EN AW-AI 99,5	1050A	-	A	D	R	-	600 X 1.200	Type																				
										A	X	X	X	X	-	X	X	X	-	-	X									
										D	X	X	X	X	-	X	X	X	-	-	X									
ALUMINIUM ALLOY	EN AW-5052	EN AW-AI Mg2,5	5052	-	N	O	J	-	600 X 1.200	R	X	-	X	-	X	-	X	-	X	X	-									
										N	X	X	X	X	-	X	X	X	-	-	X									
										O	X	X	X	X	-	X	X	X	-	-	X									
STEEL	1.1121	C10E	AISI 1010	-	G	H	I	-	600 X 1.200	J	X	-	X	-	X	-	X	-	X	X	-									
										G	X	X	X	X	-	X	X	X	-	-	X									
										H	X	X	X	X	-	X	X	X	-	-	X									
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	-	C	F	P	-	600 X 1.200	I	X	-	X	-	X	-	X	-	X	X	-									
				Z	-	-	-	-		-	C	X	X	X	X	-	X	X	X	-	-	X								
													F	X	X	X	X	-	X	-	-	-	-							
													P	X	-	X	-	X	-	X	-	X	X	-						
BRASS	CW505L	CuZn30	C26000	(*1)	L	M	-	-	600 X 1.200	Z	X	-	X	-	X	-	X	-	-	-	-									
													L	X	X	X	X	-	X	X	X	-	-	X						
POLYESTER	PET	PET	PET	(*1)	PET 50	-	PET 100	PET 200	600 X 1.200	M	X	X	X	X	-	X	X	X	-	-	X									
																			PET 50	X	-	X	-	X	-	X	-	X	X	-
																			PET 100	X	-	X	-	X	-	X	-	X	X	-
									PET 200	-	-	X	-	X	-	X	-	-	-	-										

LAMINUM® HP - HIGH-PRECISION LAMINATED SHIM STOCK

Material	Description			Layer combination [mm]		Format l x b [mm]	Total thickness													
	Numeric	Chemical	U.S.A.	0,025	0,05		[mm]	0,5	0,8	1,0	1,2	1,5	1,6	2,0	2,4	2,5	3,0	3,2		
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	1 Layer	Quantity of Layers 0,05 according Total thickness	600 X 1.200	Type													
							HP1	X	-	X	-	X	-	X	-	X	X	-		
																HP2	X	-	X	-
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	5 Layers	Quantity of Layers 0,05 according Total thickness	130 X 1.100	Type													
							HP2	X	-	X	-	X	-	X	-	X	X	-		
																HP3	X	-	X	-
ALUMINIUM ALLOY	EN AW-5052	EN AW-AI Mg2,5	5052	1 Layer Brass	Quantity of Layers 0,05 according Total thickness	600 X 1.200	Type													
							HP3	X	-	X	-	X	-	X	-	X	X	-		
																HP4	-	-	X	-
BRASS	CW505L	CuZn30	C26000	1 Layer Brass	Quantity of Layers 0,05 according Total thickness	600 X 1.200	Type													
							HP3	X	-	X	-	X	-	X	-	X	X	-		
																HP4	-	-	X	-

- REMARK:**
- *1 0,025mm Layer thickness available as composite shim plate.
 - *2 Test executed by the Staatliche Materialprüfanstalt, Darmstadt, Germany. Results achieved from the static pressure test and under the room temperature. Displayed values are the lowest of one test cycle and have been decreased by 30%. Test set up and test procedure subject to inquiry.
 - *3 The thickness tolerance of Laminum®/ M-Tech®L shim stock is basically plus twice of the single foil thickness, therefore, in technical term: 0/+2 foil thicknesses max.
 - *4 Subject to changes.
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Laminum®/ M-Tech®L - Laminated Shim Stock
Material Specification (*4)

Material	Description			E-modulus [Mpa] (*2)					Rp0,2 [Mpa] (*2)				
	Numeric	Chemical	U.S.A.	0,025	0,050	0,075	0,100	0,200	0,025	0,050	0,075	0,100	0,200
				Type					Type				
ALUMINIUM	EN AW-1050A	EN AW-AI 99,5	1050A	-	A	D	R	-	-	A	D	R	-
Discontinued material! Aluminium EN AW-AI99,5 replaced by Aluminium alloy EN AW-AIMg2,5!				-	13.185	22.201	18.790	-	-	106	108	102	-
ALUMINIUM ALLOY	EN AW-5052	EN AW-AI Mg2,5	5052	-	N	O	J	-	-	N	O	J	-
				-	29.464	37.779	30.000	-	-	200	193	190	-
STEEL	1.1121	C10E	AISI 1010	-	G	H	I	-	-	G	H	I	-
				-	28.656	42.744	30.000	-	-	184	235	180	-
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	Z	C	F	P	-	Z	C	F	P	-
				70.688	29.137	31.751	30.994	-	948	192	174	173	-
BRASS	CW505L	CuZn30	C26000	-	L	M	-	-	-	L	M	-	-
				-	23.043	26.824	-	-	-	101	152	-	-
POLYESTER	PET	PET	PET	-	PET 50	-	PET 100	PET 200	-	PET 50	-	PET 100	PET 200
				-	2.477	-	2.450	2.288	-	64	-	64	67

LAMINUM® HP - HIGH-PRECISION LAMINATED SHIM STOCK

Material	Description			E-modulus [Mpa]				Rp0,2 [Mpa]			
	Numeric	Chemical	U.S.A.	Type HP1				Type HP1			
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	29.137				192			
Material	Description			E-modulus [Mpa]				Rp0,2 [Mpa]			
	Numeric	Chemical	U.S.A.	Type HP2				Type HP2			
STAINLESS STEEL	1.4301	X5CrNi18-10	AISI 304	29.137				192			
STAINLESS STEEL	1.4310	X10CrNi18-8	AISI 301								
Material	Description			E-modulus [Mpa]				Rp0,2 [Mpa]			
	Numeric	Chemical	U.S.A.	Type HP3				Type HP3			
ALUMINIUM ALLOY	EN AW-5052	EN AW-AI Mg2,5	5052	29.464				200			
BRASS	CW505L	CuZn30	C26000								
Material	Description			E-modulus [Mpa]				Rp0,2 [Mpa]			
	Numeric	Chemical	U.S.A.	Type HP4				Type HP4			
STEEL	1.1121	C10E	AISI 1010	28.656				184			
BRASS	CW505L	CuZn30	C26000								

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Laminum®/ M-Tech®L - Laminated Shim Stock
Material Specification (*4)

Material	Technical Delivery Condition	AEROSPACE Material Specification	AIRBUS Aerospace Series, Peel shim	AIRBUS GROUP Foliated Plates	Aerospace & Aviation Laminated Shim
ALUMINIUM Discontinued material!	DIN EN 573-3	-	ABS1507 Material Code D	ASNA0115 Material Code D	LN 29557 Part 3
ALUMINIUM ALLOY	DIN EN 573-3	AMS-DTL-22499 Composition 1	ABS1507 Material Code D	ASNA0115 Material Code D	LN 29557 Part 3
STEEL	DIN EN 10084	AMS-DTL-22499 Composition 4	ABS1507 Material Code A	ASNA0115 Material Code A	-
STAINLESS STEEL	DIN EN 10088-2	AMS-DTL-22499 Composition 3	ABS1507 Material Code C	ASNA0115 Material Code C	LN 29557 Part 1
BRASS	DIN EN 1652	AMS-DTL-22499 Composition 2	ABS1507 Material Code B	ASNA0115 Material Code B	LN 29557 Part 2
POLYESTER	PolyEthylenTerephthalat	-	ABS1507 Material Code E	ASNA0115 Material Code E	-
LAMINUM® HP - HIGH-PRECISION LAMINATED SHIM STOCK					
Material	DIN EN 10088-2	-	-	-	-
STAINLESS STEEL					
Material	DIN EN 10088-2	-	-	-	-
STAINLESS STEEL					
STAINLESS STEEL	DIN EN 573-3	-	-	-	-
ALUMINIUM ALLOY					
BRASS	DIN EN 1652	-	-	-	-
Material	DIN EN 10084	-	-	-	-
STEEL					
BRASS	DIN EN 1652	-	-	-	-

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