

Mechanical Properties for Standard Alloys

Alloy	Temper EN 512 (DIN)	Mech. Values EN 485-2	min. Bending Radius Factor for nominal gauges and bending up to 90°				
			Tensile strength R _m (MPa) min.-max.	Proof stress R _{p0.2} (MPa) min.-max.	Elongation min. A ₅₀ (%) for nom. gauges over 0.2 0.5 1.5 3.0 6.0 up to 0.5 1.5 3.0 6.0 10.0	0.2	0.5

1050A (Al 99.5) density: 2.706 t/m ³	O/H111 (W7)	65-90	20	20	22	26	29	35	0	0	0	0.5	1.0
	H12 (F9)	85-125	65	(min. 0.9 mm)		4	5	7	0	0	0.5	1.0	
	H22 (G9)	85-125	55	4	5	6	11	0	0	0.5	1.0		
	H14 (F11)	105-145	85	2	3	4	5	0	0.5	1.0	1.5		
	H24 (G11)	105-145	75	3	4	5	8	0	0.5	1.0	1.5		
	H16 (F13)	120-160	100	1	2	3	3*	0.5	1.0	1.5	1.5*		
	H26 (G13)	120-160	90	2	3	4	4*	0.5	1.0	1.5	1.5*		
	H18	140	120	1	2	2		1.0	2.0	3.0			
	H28	140	110	2	2			1.0	2.0	3.0			
H19 (F15)	150	130	1	1									
1200 (Al 99.0) density: 2.711 t/m ³	O/H111 (W8)	75-105	25	19	21	24	28	33	0	0	0	0.5	1.0
	H12 (F10)	95-135	75	(min. 0.9 mm)		4	5	6	0	0	0.5	1.0	
	H22 (G10)	95-135	65	4	5	6	10	0	0	0.5	1.0		
	H14 (F12)	115-155	95	2	3	4	5	0	0.5	1.0	1.5		
	H24	115-155	90	3	4	5	7	0	0.5	1.0	1.5		
	H16 (F14)	130-170	115	1	2	3	3*	0.5	1.0	1.5	1.5*		
	H26	130-170	105	2	3	4	4*	0.5	1.0	1.5	1.5*		
	H18	150	130	1	2	2		1.0	2.0	3.0			
	H19 (F16)	160	140	1	1	1							
3003 (Al Mn1 Cu) density: 2.731 t/m ³	O/H111 (W10)	95-135	35	15	17	20	23	24	0	0	0	1.0	1.5
	H12 (F13)	120-160	90	(min. 0.7 mm)		4	5	6	0	0.5	1.0	1.0	
	H22	120-160	80	6	7	8	9	0	0.5	1.0	1.0		
	H14 (F15)	145-185	125	2	2	3	4	0.5	1.0	1.0	2.0		
	H24	145-185	115	4	4	5	6	0.5	1.0	1.0	2.0		
	H16 (F17)	170-210	150	1	2	2	2*	1.0	1.5	2.0	2.0*		
	H18 (F19)	190	170	1	2	2		1.5	2.5	3.0			
	H19	210	180	1	2								
	3103 (Al Mn1) density: 2.729 t/m ³	O/H111 (W9)	90-130	35	17	19	21	24	28	0	0	0	1.0
H12 (F12)		115-155	85	(min. 0.7 mm)		4	5	6	0	0.5	1.0	1.0	
H22		115-155	75	6	7	8	9	0	0.5	1.0	1.0		
H14 (F14)		140-180	120	2	2	3	4	0.5	1.0	1.0	2.0		
H24		140-180	110	4	4	5	6	0.5	1.0	1.0	2.0		
H16 (F17)		160-200	145	1	2	2	2*	1.0	1.5	2.0	2.0*		
H18 (F19)		185	135	1	2	2		1.5	2.5	3.0			
H19		200	155	1	2			1.5	2.5				
3004 (Al Mn1 Mg1) density: 2.714 t/m ³		O/H111 (W16)	155-200	60	13	14	15	16	16	0	0	0	1.0
	H12 (F19)	190-240	155	2	3	4	5	0	0.5	1.0	1.5		
	H22/32 (G19)	190-240	145	4	5	6	7	0	0.5	1.0	1.5		
	H14 (F22)	220-265	180	1	2	2	3	0.5	1.0	1.5	2.0		
	H24/34 (G22)	220-265	170	3	4	4		0.5	1.0	1.5			
	H16 (F24)	240-285	200	1	1	2	2*	1.0	1.5	2.5	2.5*		
	H26/36 (G24)	240-285	190	3	3	3		1.0	1.5	2.5			
	H18 (F28)	260	230	1	1			1.5	2.5				
	H28/38 (G28)	260	220	2	3			1.5	2.5				
H19	270	240	1	1									
3104 (Al Mn1 Mg1 Cu) density: 2.714 t/m ³	O/H111 (W16)	155-200	60	13	14	15	16	16	0	0	0	1.0	2.0
	H12 (F19)	190-240	155	2	3	4	5	0	0.5	1.0	1.5		
	H22/32 (G19)	190-240	145	4	5	6	7	0	0.5	1.0	1.5		
	H14 (F22)	220-265	180	1	2	2	3	0.5	1.0	1.5	2.0		
	H24/34 (G22)	220-265	170	3	4	4		0.5	1.0	1.5			
	H16 (F24)	240-285	200	1	1	2	2*	1.0	1.5	2.5	2.5*		
	H26/36 (G24)	240-285	190	3	3	3		1.0	1.5	2.5			
	H18 (F28)	260	230	1	1	2		1.5	2.5				
	H28/38 (G28)	260	220	2	3			1.5	2.5				
H19	270	240	1	1									
3005 (Al Mn1 Mg0.5) density: 2.721 t/m ³	O/H111 (W12)	115-165	45	12	14	16	19		0	0	0.5	1.0	
	H12 (F16)	145-195	125	3	4	4	5	0	0.5	1.0	1.5		
	H22 (G16)	145-195	110	5	5	6	7	0	0.5	1.0	1.5		
	H14 (F18)	170-215	150	1	2	2	3	0.5	1.0	1.5	2.0		
	H24 (G18)	170-215	130	4	4	4		0.5	1.0	1.5			
	H16 (F20)	195-240	175	1	2	2	2*	1.0	1.5	2.5	2.5*		
	H26 (G20)	195-240	160	3	3	3		1.0	1.5	2.5			
	H18 (F22)	220	200	1	2			1.5	2.5				
	H28	220	190	2	2			1.5	2.5				
H19 (F24)	235	210	1	1									

* marked values are valid for gauges over 3 mm up to 4 mm