

# WALTHER FLENDER TIMING BELT PULLEYS - MATERIALS

Designation	Material Nr.	International material standards					Characteristics	Tensile strength [N/mm <sup>2</sup> ]	Yield strength [N/mm <sup>2</sup> ]
		DIN (Deutschland)	AISI (USA)	JIS (Japan)	GB (China)	UNS*			
<b>Steel (St): Economical and wear-resistant standard material for timing belt pulleys, suitable for use in clamping sets</b>									
St 37-2	1.0037	according to DIN EN 10025	1015	STPG370	Q235A	G10150	Standard	360-510	approx. 235
S 235 JR									
C45	1.0503	according to DIN EN 10083	1045	S45C	45 (U20452)	G10450	Standard	580-660	approx. 400
St 52-3	1.0570	according to DIN EN 10025	LF2	SGV480	Q345	K03011	good weldability	450 - 630	approx. 280
S 355 J2									
9SMn28K	1.0715	according to DIN EN 10087	1213	SUM22	Y35	G12130	good machinability	360-570	approx. 305
11SMn30+C									
16 MnCr5	1.7131	according to DIN EN 10084	NV	G4053	20CrMn	NV	case-hardenable	640 - 930	approx. 440
42 CrMo4V	1.7225	according to DIN EN 10084	4140	SNB7	NV	G41400	high-strength	750-1300	approx. 650
<b>Stainless steel (VA): Ideal for use in the food industry, resistant to chemicals, suitable for use with clamping sets</b>									
X5CrNi18-10	1.4301	according to DIN EN 10088	304	SUS304	06Cr19Ni10	S30400	non-corrosive, good weldability	500-700	approx. 225
X8CrNiS18 9	1.4305	according to DIN EN 10088	303	SUS303	Y12Cr18Ni9	S30300	non-corrosive, good machinability	500 - 700	approx. 225
<b>Aluminium (AL): Optimal for dynamic drives, due to the low mass moments of inertia, for particularly wear-resistant gearing Surface treatment recommended</b>									
AlCuMg1	3.1325	EN AW-2017A	2017A	A2017	H14	NV	good machinability RoHS compliant **	360-400	approx. 250
AlCuMgSi									
AlMgSi 1	3.2315	EN AW 6082	6081	A6061	H30	NV	good machinability, good weldability RoHS compliant **	270-310	approx. 230
AlSiMgMn									
AlMg4,5Mn	3.3547	EN AW 5083	5083	A5083	N8	NV	good weather and sea water resistance RoHS compliant **	270-350	approx. 120
AlMg4,5Mn0,7									
AlZnMgCu1,5	3.4365	EN AW 7075	7075	A7075	2L95	NV	high-strength RoHS compliant **	440-500	approx. 440
AlZn5,5MgCu									

\* UNS = Unified Numbering System for Metals and Alloys

\*\* in accordance with the RoHS Directive and REACH Regulation as amended, contains no SVHC substances above the permitted concentrations (state of knowledge 05/2021)

## Materials in the use of form-bound tools, e.g. for gears and timing belt pulleys in printers, goods output devices, etc.

Designation	trade names	Characteristics	Yiel strength 1*) 2*)
<b>Plastics (Thermoplastics):</b>			
PA 6 (Polyamide)	Ultramid, Rilsan"		50 - 84
PA 66GF (Polyamide)	Durethan	glass fiber reinforced	100 - 180
PC (Polycarbonate)	Lexan, Makrolon	low shrinkage	55 - 63
POM (Polyoxymethylen)e	Delrin, Hostaform		55 - 62
<b>Aluminium- respectively zinc die casting:</b>			
G-ALSi2	3.2581.01	good machinability	150 - 200
G-ALMg3	3.3541.01	weather-resistant	140 - 190
ZnAl4Cu1	Z10410	good machinability, high-strength	290 - 370

1\*) dry/wet

2\*) The voltage specifications depend on the batch and brand.

The values given are for orientation and are influenced by environmental conditions.