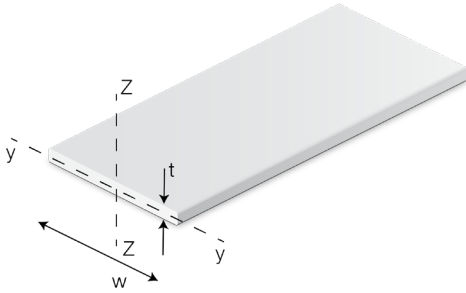


TECHNICAL DATA SHEET FOR STRUCTURAL PROFILES



***Standard stock profiles available in S6 and 12 meters**

Profile w x t	w mm	t mm	A mm ²	As,z mm ²	As,y mm ²	g kg/m	I _{yy} mm ⁴	I _{zz} mm ⁴
Faktor	1	1	10 ³	10 ³	10 ³	1	10 ⁶	10 ⁶
30 x 6	30	6	0,18	0,12	0,12	0,32	0,0005	0,013
50 x 6	50	6	0,3	0,20	0,20	0,54	0,0009	0,062
100 x 6	100	6	0,6	0,40	0,40	1,08	0,0018	0,500
100 x 8	100	8	0,8	0,53	0,53	1,44	0,0043	0,670
100 x 10*	100	10	1,0	0,67	0,67	1,80	0,0083	0,833
500 x 6*	500	6	3,0	2,00	2,00	5,40	0,009	62,5
500 x 10*	500	10	5,0	3,32	3,32	9,00	0,0417	104,180

TECHNICAL DATA SHEET FOR STRUCTURAL PROFILES



Material data for structural profiles – Characteristic values

Strength

Material Properties	Unit	Characteristic value
Tensile strength, axial, f_{tx}	N/mm ²	280
Tensile strength, transverse, f_t	N/mm ²	50
Compression strength, axial, f_{cx}	N/mm ²	290
Compression strength, transverse, f_{cy}	N/mm ²	95
Pin bearing strength, axial, f_{px}	N/mm ²	210
Pin bearing strength, transverse, f_{py}	N/mm ²	130
Flexural strength, axial, f_{fx}	N/mm ²	250
Flexural strength, transverse, f_{fy}	N/mm ²	60
Interlaminar Shear strength, T_m	N/mm ²	20
In-plane Shear strength, f_{txy}	N/mm ²	40
Shear strength perpendicular to the plane, $f_{\perp II}$ (Punching shear)	N/mm ²	50
Shear strength in plane, $f_{txy, torsion}$ (torsion of rectangular hollow sections)	N/mm ²	40

Stiffness and Poisson's ratio

Material Properties	Unit	Average value
Full section modulus, E_{eff} , = Tensile modulus, axial, E_{tx} , = Compression modulus, axial, E_{cx}		
- profiles with wall thickness 5-8 mm	N/mm ²	28.000
- profiles with wall thickness 10 mm		30.000
- profiles with wall thickness 12-18 mm		31.000
Tensile modulus, transverse, E_{ty}	N/mm ²	8.000
Compression modulus, transverse, E_{cy}	N/mm ²	13.000
Poisson's ratio, ν_{yx}	-	0,23
Poisson's ratio, ν_{xy}	-	0,07
In-plane shear modulus, G_{xy} and G_{yz}	N/mm ²	3.600

Strain

Material Properties	Unit	Characteristic value
Tensile failure strain, axial, ϵ_{tx}	%	0,90
Tensile failure strain, transverse, ϵ_{ty}	%	0,60
Compression failure strain, axial, ϵ_{cx}	%	0,90
Compression failure strain, transverse, ϵ_{cy}	%	0,70

Other Properties

Material Properties	Unit	Characteristic value
Thermal expansion, axial	K ⁻¹	10 · 10 ⁻⁶
Thermal expansion, transverse	K ⁻¹	17 · 10 ⁻⁶
Fibre content by weight	%	68% ± 5%
Degree of cure- Differential scanning calorimetry (DSC)	%	<6%
Creep (after 24 hours)	%	<6%