

| Section | Color | Dimensions mm | Area mm ² | Weight g/m | Second moment of area | | Y mm | X mm | Section modulus | | Intertia of gyration | | Torsional constant J mm ⁴ |
|-------------|--------|----------------|----------------------|------------|---------------------------------|---------------------------------|-------|-------|---------------------------------|---------------------------------|----------------------|--------------------|---|
| | | | | | I _{xx} mm ⁴ | I _{yy} mm ⁴ | | | Z _{xx} mm ³ | Z _{yy} mm ³ | I _{xx} mm | I _{yy} mm | |
| ANGLE | Grey | 150x150x10 | 2 900 | 5 460 | 6 371 829 | 6 371 829 | 108,8 | 108,8 | 58 570 | 58 570 | 46,87 | 46,87 | 96 666 |
| ANGLE | Grey | 100x100x10 | 1 899 | 3 530 | 1 795 202 | 1 795 202 | 71,3 | 71,3 | 25 182 | 25 182 | 30,75 | 30,75 | 63 333 |
| ANGLE | Grey | 76x76x9.5 | 1 321 | 2 560 | 705 750 | 705 750 | 53,2 | 53,2 | 13 256 | 13 256 | 23,12 | 23,12 | 41 228 |
| ANGLE | Grey | 60x60x8 | 909 | 1 690 | 296 887 | 296 887 | 42,2 | 42,2 | 7 035 | 7 035 | 18,08 | 18,08 | 19 115 |
| ANGLE | Grey | 50x50x6 | 568 | 1 060 | 130 932 | 130 932 | 35,4 | 35,4 | 3 701 | 3 701 | 15,18 | 15,18 | 6 768 |
| ANGLE | Grey | 50x50x5 | 476 | 830 | 112 003 | 112 003 | 35,7 | 35,7 | 3 136 | 3 136 | 15,34 | 15,34 | 3 958 |
| BOX | Grey | 100x100x8 | 2 950 | 5 490 | 4 192 840 | 4 192 840 | 50,0 | 50,0 | 83 857 | 83 857 | 37,70 | 37,70 | 6 351 271 |
| BOX | Grey | 75x75x8 | 2 156 | 4 010 | 1 635 518 | 1 635 518 | 37,5 | 37,5 | 43 614 | 43 614 | 27,54 | 27,54 | 2 487 106 |
| BOX | Yellow | 60x60x4.5 | 989 | 1 850 | 506 745 | 506 745 | 30,0 | 30,0 | 16 892 | 16 892 | 22,64 | 22,64 | 790 205 |
| BOX | Grey | 60x60x4.5 | 989 | 1 850 | 506 745 | 506 745 | 30,0 | 30,0 | 16 892 | 16 892 | 22,64 | 22,64 | 790 205 |
| BOX | Yellow | 51x51x6.35 | 1 134 | 2 230 | 383 499 | 383 499 | 25,5 | 25,5 | 15 039 | 15 039 | 18,39 | 18,39 | 589 294 |
| BOX | Grey | 51x51x6.35 | 1 134 | 2 230 | 383 499 | 383 499 | 25,5 | 25,5 | 15 039 | 15 039 | 18,39 | 18,39 | 589 294 |
| BOX | Grey | 44x44x6 | 904 | 1 640 | 221 497 | 221 497 | 22,0 | 22,0 | 10 068 | 10 068 | 15,65 | 15,65 | 345 377 |
| CHANNEL | Grey | 240x72x12 | 4 342 | 8 080 | 1 704 540 | 32 785 296 | 54,0 | 120,0 | 31 542 | 273 211 | 19,81 | 86,90 | 207 360 |
| CHANNEL | Grey | 200x60x10 | 3 005 | 5 590 | 820 522 | 15 729 193 | 45,0 | 100,0 | 18 226 | 157 292 | 16,52 | 72,35 | 100 000 |
| CHANNEL | Grey | 150x50x6 | 1 436 | 2 570 | 294 160 | 4 454 815 | 37,8 | 75,0 | 7 786 | 59 398 | 14,31 | 55,70 | 17 136 |
| CHANNEL | Grey | 100x40x5 | 848 | 1 620 | 118 226 | 1 201 478 | 29,3 | 50,0 | 4 038 | 24 030 | 11,81 | 37,65 | 7 083 |
| CHANNEL | Grey | 102x45x4.8/3.2 | 699 | 1 370 | 141 416 | 1 161 783 | 30,8 | 51,0 | 4 593 | 22 780 | 14,22 | 40,77 | n/a |
| CHANNEL | Grey | 75x35x5 | 679 | 1 260 | 73 776 | 547 357 | 24,8 | 37,5 | 2 978 | 14 596 | 10,42 | 28,39 | 5 625 |
| I BEAM | Grey | 150x75x8 | 2 292 | 4 260 | 7 744 159 | 566 412 | 75,0 | 37,5 | 103 255 | 15 104 | 58,13 | 15,72 | 63 010 |
| I BEAM | Grey | 120x60x6 | 1 388 | 2 580 | 3 025 740 | 216 804 | 60,0 | 30,0 | 50 429 | 7 227 | 46,69 | 12,50 | 21 340 |
| I BEAM | Grey | 101x51x6 | 1 142 | 2 320 | 1 724 329 | 128 242 | 50,5 | 25,4 | 34 145 | 5 049 | 38,86 | 10,60 | 17 840 |
| I BEAM | Grey | 200x200x10 | 5 882 | 10 800 | 41 619 914 | 13 314 756 | 100,0 | 100,0 | 416 199 | 133 148 | 84,12 | 47,58 | 251 333 |
| CHANNEL | Yellow | 83x30x5/3 | 490 | 910 | 42 056 | 507 574 | 20,5 | 41,5 | 2 048 | 12 231 | 9,26 | 32,18 | n/a |
| CHANNEL | Grey | 83x30x5/3 | 490 | 910 | 42 056 | 507 574 | 20,5 | 41,5 | 2 052 | 12 231 | 9,26 | 32,18 | n/a |
| LADDER BOX | Grey | 85x35x4 | 896 | 1 670 | 176 985 | 762 898 | 17,5 | 42,5 | 10 113 | 17 951 | 14,05 | 29,18 | 460 832 |
| LADDER RUNG | Yellow | 34x25 | 355 | 730 | 39 239 | 39 239 | 17,3 | 17,3 | 2 275 | 2 275 | 10,51 | 10,51 | n/a |
| LADDER RUNG | Grey | 34x25 | 355 | 730 | 39 239 | 39 239 | 17,3 | 17,3 | 2 275 | 2 275 | 10,51 | 10,51 | n/a |
| LADDER BOX | Grey | 64x27x4/2 | 441 | 820 | 47 377 | 252 330 | 13,6 | 32,1 | 3 496 | 7 861 | 10,37 | 23,93 | n/a |
| HANDRAIL | Yellow | 51mm | 622 | 1 200 | 171 668 | 370 526 | 34,2 | 33,5 | 5 018 | 11 074 | 16,61 | 24,40 | n/a |
| HANDRAIL | Grey | 51mm | 622 | 1 200 | 171 668 | 370 526 | 34,2 | 33,5 | 5 018 | 11 074 | 16,61 | 24,40 | n/a |
| HANDRAIL | Yellow | 60mm | 728 | 1 310 | 135 695 | 568 979 | 31,9 | 38,0 | 4 252 | 14 973 | 13,65 | 27,95 | n/a |
| HANDRAIL | Grey | 60mm | 728 | 1 310 | 135 695 | 568 979 | 31,9 | 38,0 | 4 252 | 14 973 | 13,65 | 27,95 | n/a |
| TUBE | Yellow | 38x32 | 279 | 620 | 44 140 | 44 140 | 19,0 | 19,0 | 2 323 | 2 323 | 12,58 | 12,58 | 88 280 |
| TUBE | Grey | 38x32 | 279 | 620 | 44 140 | 44 140 | 19,0 | 19,0 | 2 323 | 2 323 | 12,58 | 12,58 | 88 280 |
| TOE RAIL | Yellow | 150x3 | 566 | 1 140 | 12 672 | 967 353 | 8,0 | 75,0 | 1 590 | 12 898 | 4,73 | 41,35 | n/a |
| TOE RAIL | Grey | 150x3 | 566 | 1 140 | 12 672 | 967 353 | 8,0 | 75,0 | 1 590 | 12 898 | 4,73 | 41,35 | n/a |

Mechanical properties (E23 European standard)

| Property | Unit | E23 | E17 |
|-------------------------------------|------|-----|-----|
| Full section bend test | GPa | 23 | 17 |
| Tension modulus - axial | GPa | 23 | 17 |
| Tension modulus - transverse | GPa | 7 | 5 |
| Tension strength - axial | MPa | 240 | 170 |
| Tension strength - transverse | MPa | 50 | 30 |
| Pin bearing strength - axial | MPa | 150 | 90 |
| Pin bearing strength - transverse | MPa | 70 | 50 |
| Flexural strength - axial | MPa | 240 | 170 |
| Flexural strength - transverse | MPa | 100 | 70 |
| Interlaminar shear strength - axial | MPa | 25 | 15 |

Recommended references for use of pultruded profiles in structural applications:

EN13706: European standard for structural pultrusions

EN14122: European standards for access structures

DIN 18829

--Reduction factors for long term loadings

--Chemical resistance tables

Eurocomp Design guidance

Physical properties

| Property | Method | Unit | Typical value |
|---|------------|--------------------|---------------|
| Density | ISO1183 | g/cm ³ | 1,7 - 2,0 |
| Barcol hardness | ASTM D2583 | Barcol | 50 |
| Water absorption | ISO62 | % | 0.7 max |
| Electrical strength | DIN53481 | kV/mm | 44 109 |
| Coefficient of linear thermal expansion | BS6319 | 10/ ^o K | 44 110 |
| Heat distortion temperature | ISO75 | °C | >150 |

Chemical properties

| Environment | Concentration | Isophthalic polyester | |
|---------------------|---------------|-----------------------|------|
| | | 20°C | 60°C |
| Acetic acid | 25 | R | NR |
| Acetone | 100 | NR | NR |
| Ammonium hydroxide | 10 | NR | NR |
| Fatty acids | 100 | R | R |
| Gasoline | 100 | R | NR |
| Hydrochloric acid | 15 | R | NR |
| Mineral oils | 100 | R | R |
| Nitric acid | 5 | R | NR |
| Sodium hydroxide | 5 | NR | NR |
| Sodium hypochlorite | 5 | R | NR |
| Sulphuric acid | 10 | R | NR |
| Water (all) | 100 | R | R |

R = Recommended

NR = Not recommended

This table represents the effects of various chemicals on our standard structural profiles. The information is based upon test results and years of experience, and is correct to the best of our knowledge. Please contact us for recommendations on the use in your particular environment, which may involve other chemicals or combinations thereof. Good practice requires sample evaluation in the actual chemical environment to precede any application, if questions about suitability arise.