Characteristic properties

The strength characteristics and the stiffness characteristics of the sawn timber comply with Class C24 as per Eurocode 5.

Eurocode 5 (2010-12) C24	SIA 265 (2012) C24	Norm Strength class
		Strength characteristics in N/mm²
$f_{m,k}$ = 24.0	$f_{m,d}$ = 14.0	Bending
$f_{t,0,k}$ = 14.0	$f_{t,0,d}$ = 8.0	Tension parallel to the fibre
$f_{t,90,k}$ = 0.4	$f_{t,90,d}$ = 0.1	Tension perpendicular to the fibre
$f_{c,0,k}$ = 21.0	$f_{c,0,d}$ = 12.0	Compression perpendicular to the fibre
$f_{c,90,k}$ = 2.5	$f_{c,90,d}$ = 1.8	Compression perpendicular to the fibre
$f_{v,k}$ = 4.0	$f_{v,d}$ = 1.5	Shear
		Stiffness characteristics in N/mm²
$E_{0,mean}$ = 11'000 $E_{90,mean}$ = 370 G_{mean} = 690		Modulus of elasticity parallel to the fibre Modulus of elasticity perpendicular to the fibre Shear modulus
$f_{k,fi} = f_k \cdot k_{fi}$	$f_{d,fi} = 1.8 \cdot f_d$	Strength characteristics under fire load in N/mm²
k_{fi} = 1.25		Factor (20% fractile value)
$f_{m,k,fi}$ = 30.0	$f_{m,d,fi}$ = 25.2	Bending
$f_{t,0,k,fi}$ = 17.5	$f_{t,0,d,fi}$ = 14.4	Tension parallel to the fibre
$f_{t,90,k,fi}$ = 0.5	$f_{t,90,d,fi}$ = 0.2	Tension perpendicular to the fibre
$f_{c,0,k,fi}$ = 26.3	$f_{c,0,d,fi}$ = 21.6	Compression parallel to the fibre
$f_{c,90,k,fi}$ = 3.1	$f_{c,90,d,fi}$ = 3.2	Compression perpendicular to the fibre
$f_{v,k,fi}$ = 5.0	$f_{v,d,fi}$ = 2.7	Shear