

MICROALLOYED STEEL

CHEMICAL COMPOSITION (IN % BY WEIGHT)

	C	Si	Mn	V	Al
Ø	0.21	0.50	1.43	0.10	0.02

Standard analysis

APPLICATIONS

- » Earthquake resistance
- » Heavily reinforced structural elements
- » Precast concrete elements
- » Supports

APPROVAL

Top700 high-strength reinforcing steel is listed in the "Register normkonformer Betonstähle" [Swiss Code for Structural Concrete] as number 3.5 and thus meets the requirements of the SIA 262 standard.

LABELLING

Top700 high-strength reinforcing steel is labeled with the Swiss Steel mark ("country-code 2, no. 19") and the product name "Top700".

PHYSICAL PROPERTIES

Density in kg/dm ³	7.85
Magnetizability	yes
Thermal conductivity at 20°C in W/(m K)	50
Young's modulus in GPa at » 20°C	205
Mean thermal expansion coefficient in 10 ⁻⁵ K ⁻¹ » 20°C - 100°C	10

MECHANICAL PROPERTIES

Yield strength f_{sk}	Ratio $(f_t / f_s)_k$	Elongation under max. load ϵ_{uk}
[N/mm ²]	[-]	[%]
≥ 700	≥ 1.08	≥ 5.0

Top700 complies with B700B reinforcing steel pursuant to SIA 262.



Top700

Higher strength
reinforcing steel

PRODUCT DATA SHEET

HIGHER STRENGTH REINFORCING STEEL

Top700 is characterized by a yield strength of $> 700 \text{ N/mm}^2$. Top700 is 40% stronger than conventional reinforcing steel. Despite its high strength, Top700 meets all the requirements of ductility class B and the standard SIA 262.

These properties make Top700 suitable for applications in which the amount of reinforcing steel used in concrete is to be reduced or particularly high strength is required or in which the final structure is to be earthquake-proof.

Top700 is particularly suitable for highly reinforced structural components. By utilizing the material's higher strength, the total amount of steel can be reduced and it is much easier to comply with the maximum amount of steel required in components. Using this material, designs in construction can be slimmer and streamlined to make the best use of available space. The amount of work and time required at the construction site or in prefabrication can also be reduced by using less steel.

TIPS FOR PROJECT ENGINEERS

The specifications of SIA 262 are to be complied with and adapted as applicable for verification of serviceability as well as structural design. This applies for example to bending under loads, anchorage lengths and deflections.

WELDABILITY

Top700 is proven to be suitable for welding. It can be welded easily and safely with the usual methods. The characteristic mechanical properties are not changed when properly welded.

HANDLING

Like conventional reinforcing steel, no special handling is required on the construction site.

DELIVERY OPTIONS

Steel bar	Ø 26 / 30 / 34 / 40 mm
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