

SZBS800+Z

Multi-phase steel: Bainitic grade

Material no.	–
SZFG material data sheet	
Tensile strength	D

Usage

The steel grade SZBS800 features a high tensile strength of ≥ 800 MPa with sufficient elongation for forming applications. Due to its chemical composition, it offers good weldability.

In addition to the conventional hot strip version, the SZBS800 can be produced with the surface coatings ZM (StronSal®) and Z (hot dipped galvanized).

Owing to the chemical composition of both support material and coating, a good weldability is given.

Chemical composition¹⁾

(in percent by weight)

	min.	max.
C		0.11 %
Si		0.50 %
Mn		2.00 %
P		0.02 %
S		0.01 %
Al	0.015 %	
B		0.004 %

1) Heat analysis

In addition, the elements Nb, V and Ti are each alloyed either individually or in combination ($Nb + V + Ti \leq 0.20$ %).

Mechanical properties²⁾

Nom. thick. e	Yield strength R_{eH}
	≥ 680 MPa

Nom. thick. e	Tensile strength R_m
	800 – 980 MPa

Nom. thick. e	Total elongation $A^3)$
$1.80 \leq e < 3.00$ mm	≥ 10 %
$3.01 \leq e \leq 3.50$ mm	≥ 12 %

2) The tensile test values given in the table apply to transverse samples.

3) It applies to nominal thickness e:
e < 3 mm: A_{80}
e \geq 3 mm: A_5

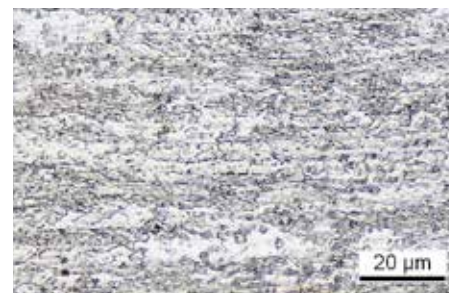
Available dimensions

Thickness in mm	Width in mm
1.80 – 3.50	900 – 1,250 ⁴⁾

4) Further dimensions on request.

Microstructure

The microstructure of SZBS800 typically consists of bainite. It may contain minor amounts of other phases (eg martensite, ferrite).



Application examples

In order to derive maximum benefit from the great tensile strength, while simultaneously minimizing component weight, the SZBS800+Z is typically used in components of the axle.

