



## SZBS800+ZE (HR660Y760T-CP-EG)

Multiphase steels: Bainitic grade

Material no.	-
according to	Materialinformationsblatt (MIB) VDA 239-100
Tensile strength class	D

### General informations

The steel grade SZBS800 is characterized by a very high yield strength and tensile strength of more than 800 MPa with sufficiently high elongation for cold forming processes.

In addition to the conventional hot strip design, hot strip grade SZBS800 can also be produced with the surface coatings ZM (StronSal®), Z (hot-dip galvanized) and ZE (electrolytically galvanized).

Due to the chemical composition of the carrier material and the coatings, good weldability is ensured.

The characteristic values correspond to an HR660Y760T-CP according to VDA 239-100.

### Chemical composition<sup>1)</sup>

(in percent by weight)

	min. in %	max. in %
C		0.18
Si		1.00
Mn		2.20
P		0.050
S		0.010
Al	0.015	1.20
B		0.005
Cu		0.20
Ti + Nb		0.25
Cr + Mo		1.00

1) Heat analysis



### Mechanical properties<sup>2)</sup>

Yield strength R <sub>p0,2</sub> in MPa	
longitudinal	660 – 820
transversal	680 – 840

Tensile strength R <sub>m</sub> in MPa	
longitudinal	760 – 960
transversal	800 – 980

Total elongation A <sub>80</sub> <sup>3)</sup> in %	
longitudinal	≥ 10
transversal	≥ 10

Total elongation A <sub>5</sub> <sup>3)</sup> in %	
longitudinal	≥ 12
transversal	≥ 11

BH <sub>2</sub> -Value in MPa	
longitudinal	≥ 30
transversal	≥ 30

2) The mechanical properties are in the testing directions longitudinal and transversal for information. Please select the desired testing direction (longitudinal or transversal) when ordering.

3) It applies to nominal thickness e:

e < 3 mm: A<sub>80</sub>

e ≥ 3 mm: A<sub>5</sub>

### Available dimensions

Thickness in mm	Width in mm
2.00 – 3.00	900 – 1,300

Thicknesses ≤ 2 mm as well as widths ≥ 1,300 mm up on request.

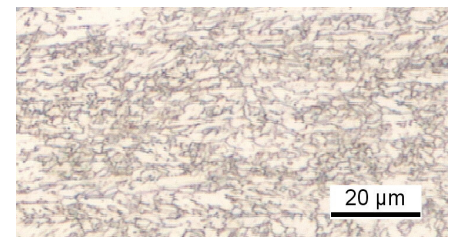
### Available surface finishes

The SZBS800+ZE is available galvanized on both sides as well as on one side. All standard zinc finishes of VDA 239-100 can be set.

The product is also available in a phosphated finish. The phosphate layer only forms on galvanized surfaces and can serve as a forming aid when manufacturing the component.

### Microstructure

The microstructure of SZBS800 typically consists of bainite. Occasionally, small amounts of other phases (e.g. martensite, ferrite) may be present.





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### Application examples

SZBS800+ZE material is used in both the body and the chassis.

In the vehicle body, the material is mainly used for safety-relevant components such as reinforcements and support structures.

Due to its high fatigue strength, SZBS800+ZE is particularly well suited for use in chassis parts subject to high dynamic stress. At the same time, these parts benefit from the weight-saving potential due to the high strength of the material. Typical application examples here are control arms and trailing arms as well as handlebars.



Control arm in automotive engineering



Above: Handlebars

Below: transverse control arm



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