

Hot rolled concrete reinforcing bars

Commercial Department

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Revision 11/2017

REBARS FOR CONCRETE REINFORCEMENT

SIDERURGICA SEVILLANA S.A. manufactures rebars according to the following quality standards, among others:

B 400 SD	UNE 36065
B 400 S	UNE 36068
B 500 SD	UNE 36065
B 500 S	UNE 36068
B 500 B	DIN 488 / A 35080
B 450 C	D.M. 14/01/2008 / A 35080
Grade 460	BS 4449
Grade 60	ASTM A 615
S-400	SI 739
S-400 W	SI 739

IDENTIFICATION OF EURA BRAND CORRUGATED BARS

Identification is carried out by thickening corrugations, according to the European code:

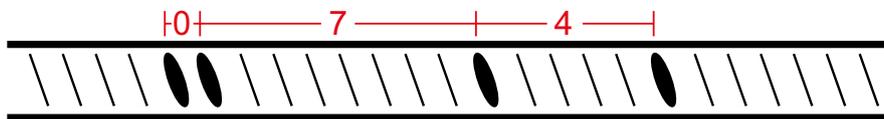


TABLE OF WEIGHTS AND SIZES OF CORRUGATED BARS

Diameter mm	Weight kg/m	Cross section mm ²
8	0,395	50,3
10	0,617	78,5
12	0,888	113
14	1,21	154
16	1,58	201
20	2,47	314
25	3,85	491
32	6,31	804

The mass, ovality and length tolerances comply with the specifications of the standards applicable to the product.

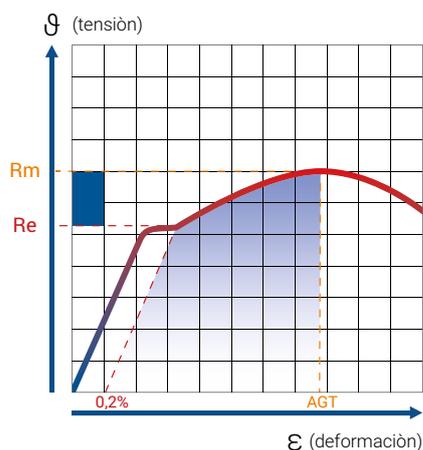
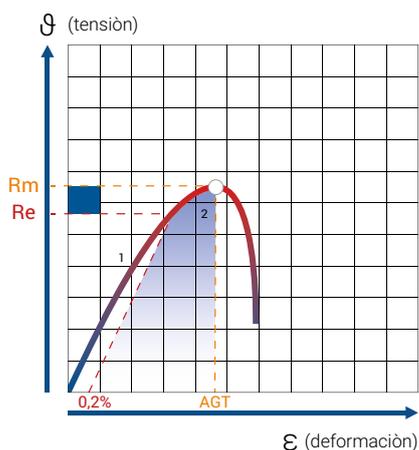
DUCTILITY

Flexibility, elasticity, plasticity are synonyms of ductility. When we speak of steel, we understand that ductility is equivalent to the capacity for structural deformation before reaching a sudden break.

The differences between "low" and "high" ductility are clear.

The stress-strain curve of a hot-rolled steel ("S" and "SD" types) have a very similar phase until reaching the elastic limit R_e . From this point, hot-rolled steel ("S" and "SD" types) change their elastic behaviour to plastic behaviour, gradually deforming until breaking. In the case of "SD" steel, the ductile area ($R_m - R_e$) is higher than for "S" steel.

Steel type	R_m/R_e	A5	AGT	Degree of Ductility
"S" (B 400 S - B 500 S)	$\geq 1,05$	$\geq 14\%-12\%$	$\geq 5\%$	NORMAL
EURA 400 SD	$\geq 1,20$	20	$\geq 9\%$	HIGH
EURA 500 SD	$\geq 1,15$	16	$\geq 8\%$	HIGH



FATIGUE

Systematic tension applied to steel, even at levels much lower than their elastic limit, can cause the steel to break. We call this cause-effect relationship fatigue.

According to new EHE guidelines, steel must be able to withstand more than 2,000,000 load cycles under specific conditions to be approved.

CYCLIC LOADS

These are caused by the repeated alternation between tension and compression on the steel. The effect of the alternatives on the steel is much greater than the effect produced by fatigue. Our products EURA 400 SD, EURA 500 S, EURA 500 SD and EURA 400 S meet the EHE standard.

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