

1. DESCRIPTION

Weldable ribbed steel bars for concrete reinforcement according to standards D.M. 2018 grade B450C, ELOT EN 10080:2005 and ELOT 1421 – 3:2007 grade B500C, BDS 9252 grade B500C, ST-009 grade B500C, "Arrêté Interministériel du 08 Mars 1997" (published on Journal Officiel de La Republique Algerienne Nr. 54) grade Fer H. AD/E E500, NF A 35-080-1 grade B500B, HRN 1130 grade B500B, PN-H-93220:2018-02 grade B500SP, SK-TP-20/0031-v1 grade B500B, 20-CPR-387-(C-29/2020) A-18/2020 grade B500B, STS-20/0012 grade B500B, CSN 42 0139 grade B500C (chemical and mechanical properties). Diameter range: 8mm ÷ 36mm according to reference standards.

2. HEAT CHEMICAL COMPOSITION

	Limit	C %	P %	S %	Cu %	N %	Ceq %
D.M. 17.01.2018	max	0.22*	0.050	0.050	0.80	0.012	0.50
ELOT 1421-3	max	0.22*	0.050	0.050	0.80	0.012	0.50
BDS 9252	max	0.22*	0.050	0.050	0.80	0.012	0.50
ST-009	max	0.22*	0.050	0.050	0.80	0.012	0.50
J.O.R.A.	max	0.27	0.060	0.060	-	-	0.51
NF A 35-080-1	max	0.22*	0.050	0.050	0.80	0.012	0.50
HRN 1130	Max	0.22*	0.050	0.050	0.80	0.012	0.50
PN-H-93220	Max	0.22*	0.050	0.050	0.80	0.012	0.50
SK-TP-20/0031-v1	Max	0.22*	0.050	0.050	0.80	0.012	0.50
A-18/2020	Max	0.22*	0.050	0.050	0.80	0.012	0.50
STS-20/0012	Max	0.22*	0.050	0.050	0.80	0.012	0.50
CSN 42 0139	Max	0.22*	0.050	0.050	0.80	0.012	0.50

NOTES: Cmax 0.25% is permitted, provided that Ceq maxi s 0.48%.
PN-H-93220: Mn_{max} = 1.60% e Si_{max} = 0.55%

3. MECHANICAL AND DIMENSIONAL PROPERTIES

Standard	Steel grade	Diameter Range mm	Y.S. min MPa	T.S. min MPa	T.S./Y.S. min	T.S./Y.S. max	Y.S./Y.S.nom max	Agt min %	A5 min %
D.M. 17.01.2018	B450C	3 ÷ 36	450c	540c	1.15c	1.35c	1.25c	7.5c	-
ELOT 1421-3	B500C	8 ÷ 40	500c	-	1.15c	1.35c	1.25c	7.5c	-
BDS 9252	B500C	8 ÷ 32	500c	575c	1.15c	1.35c	1.25c	7.5c	-
ST-009	B500C	8 ÷ 32	500c	-	1.15c	1.35c	1.30c	7.5c	16
J.O.R.A.	E500	8 ÷ 40	500	550	1.10	-	-	-	12
NF A 35-080-1	B500B	8 ÷ 36	500c	-	1.08c	-	1.30c	5c	-
HRN 1130	B500B	8 ÷ 10	500c	-	1.08c	-	-	5c	-
PN-H-93220	B500SP	8 ÷ 20	500c	-	1.15c	1.35c	1.25c	8c	16
SK-TP-20/0031-v1	B500B	8 ÷ 10	500c	-	1.08c	-	-	5c	-
A-18/2020	B500B	8 ÷ 10	500c	-	1.08c	-	-	5c	18
STS-20/0012	B500B	8 ÷ 10	500c	-	1.08c	-	-	5c	-
CSN 42 0139	B500C	8 ÷ 10	500c	-	1.15c	1.35c	1.25c	7.5c	-

NOTES:

- c – characteristic values;
- Tolerances on sections according to D.M., ELOT, BDS, ST, J.O.R.A., NF, HRN, PN-H, SK-TP, A-18, STS, CSN or alternatively according to customer's specification. In any case the weight tolerance is between -4% and +4%.
- Tolerances on length: 0/ +100 mm.
- Bend and Re-Bend tests according to D.M., ELOT, BDS, ST, J.O.R.A., NF, HRN, PN-H, SK-TP, A-18, STS, CSN.
- Specific rib area according to D.M., ELOT, BDS, ST, J.O.R.A., NF, HRN, PN-H, SK-TP, A-18, STS, CSN.

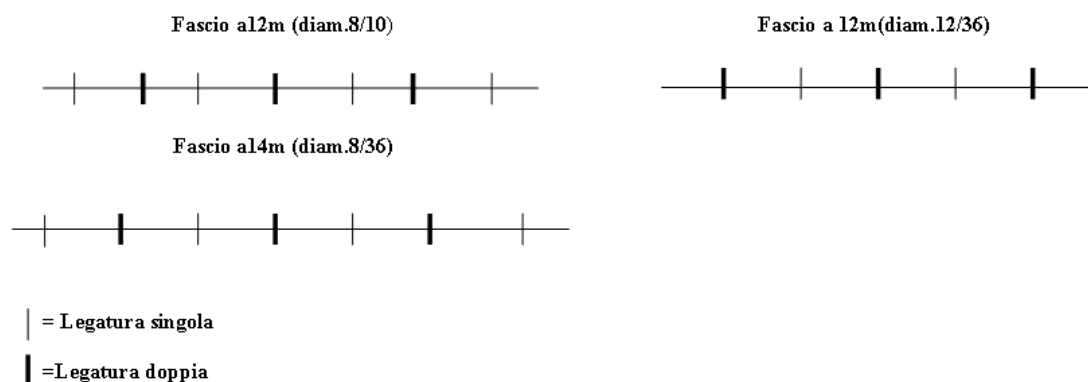
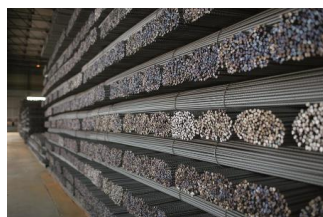
4. STANDARD PACKING

Ø8/10mm: in 12m length bundles with maximum weight 2.5t; tied with 7 bindings at position about 500-2000-4250-6000mm from the head of the bundle.

Ø12/36mm: in 12m length bundles with maximum weight 2.5t; tied with 5 bindings at position about 750-3000-6000mm from the head of the bundle.

Ø8/36mm: in 14m length bundles with maximum weight 2.5t; tied with 7 bindings at position about 500-1750-4000-7000mm from the head of the bundle.

Ø8/36mm: short bars for a maximum amount of 2% in weight and minimum length 6m.



5. STANDARD IDENTIFICATION

Each bundle identified with a label reporting: manufacturer, grade, heat number, diameter, bundle length, nominal weight, standard references, product identification logo, date of rolling.

6. STANDARD CERTIFICATION

On demand document type 3.1 according to EN10204, or Mill Test with chemical composition and mechanical properties.

For Italian market: copy of Attestato di Qualificazione from STC and document type 3.1 according to EN10204.

Where required: Declaration of Conformity.

7. APPROVALS

STC (Italy), TUV Hellas (Greece), "Ministry of Regional Development and Public Administration - Permanent Technical Council for Construction" (Romania), NISI (Bulgaria), SIMPTTESTCERT (Poland), IGH (Croatia), ZAG (Slovenia), TSUS (Slovakia), TZUS (Czech Republic), EMI (Hungary).

8. ROLLING MARK

4-7-2 mark.

