

# PRODUCT CATALOGUE



2021

## **Private Joint Stock Company «Dneprometiz» is the leading manufacturer of steel wire, nails, fasteners, mesh and steel fiber**

The products are widely used in mechanical engineering, construction, agriculture, repairing works, service industries and other areas of activity.

We provide the following: individual approach to customer, packaging of the goods as per requirements of the customer, individual orders completing, credit and delivery services. We provide recommendation regarding use of the goods, taking into account the technologies of the customer, maintain wide range of goods in our warehouse.

Our main driving force and the basis of success are professional and dedicated staff, united by a common corporate idea and sharing the company's core values: customer care, efficiency and agility, respect to employees, team work, safety.

We aspire to become the employer of choice by providing good working conditions, making fair appraisals of employee performance and providing the potential for self-realization, career development and initiative inside the company. The conditions for growth of professional skill of youth, mastering of adjacent professions by them, professional development are created in the company.

PrJSC Dneprometiz follows the quality management system (QMS), which conforms to the requirements of standards : national DSTU ISO 9001:2015 and international ISO 9001:2015. QMS is certified in the international DEKRA system by Certification authority JSC "GLOBAL-CERTIFIC".

On customers request the company obtained verification reports of a chemical composition for the wires of various application produced by the enterprise, which analysis results meet requirements of the directive of the European Union RoHS 2011/65/EU that restricts using of six dangerous substances. This directive is only one of documents permanently the growing quantity of instructions and rules on ecologically acceptable technologies.

For the purpose of maximum satisfaction of requirements and demands of our customers, the company certified the steel fiber produced in according to requirements of EN 14889-1:2006 and Directive of Council 305/2011/EEC for construction materials.

The Company obtained EU certificates of conformity and the right of production marking specified in these certificates by the sign CE is granted. Compulsory condition of the license contract is annual confirmation of certificates issued with an assessment of the monitoring system of fiber production by experts of the Lithuanian center in certification of construction production (SPSC).

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# LOW-CARBON GENERAL PURPOSE STEEL WIRE

TU U 27.3-05393145-001-2004

The quality of the wire meets the requirements of DSTU EN 10218-1 and DSTU EN 10218-2

## Admissible tolerances on diameter of wire precision class I without coating and zinc-coated

The range of diameters precision class I, mm	Admissible tolerances on diameter of wire, mm
$0,25 \leq d < 0,28$	$\pm 0,010$
$0,28 \leq d < 0,37$	$\pm 0,015$
$0,37 \leq d < 0,63$	$\pm 0,020$
$0,63 \leq d < 1,10$	$\pm 0,025$
$1,10 \leq d < 1,30$	$\pm 0,03$
$1,30 \leq d < 2,20$	$\pm 0,05$
$2,20 \leq d < 3,50$	$\pm 0,06$
$3,50 \leq d < 6,30$	$\pm 0,08$
$6,30 \leq d \leq 10,00$	$\pm 0,10$

## Admissible tolerances on diameter of wire precision class T1, T2 и T3 without coating and zinc-coated

Admissible tolerances on diameter of wire, mm	The range of diameters precision class, mm		
	T1	T2	T3
$\pm 0,012$	–	–	$0,25 \leq d < 0,33$
$\pm 0,015$	–	$0,25 \leq d < 0,31$	$0,33 \leq d < 0,52$
$\pm 0,020$	–	$0,31 \leq d < 0,55$	$0,52 \leq d < 0,91$
$\pm 0,025$	$0,30 \leq d < 0,52$	$0,55 \leq d < 0,86$	$0,91 \leq d < 1,42$
$\pm 0,030$	$0,52 \leq d < 0,74$	$0,86 \leq d < 1,24$	$1,42 \leq d < 2,05$
$\pm 0,035$	$0,74 \leq d < 1,01$	$1,24 \leq d < 1,69$	$2,05 \leq d < 2,78$
$\pm 0,040$	$1,01 \leq d < 1,31$	$1,69 \leq d < 2,20$	$2,78 \leq d < 3,63$
$\pm 0,045$	$1,31 \leq d < 1,66$	$2,20 \leq d < 2,78$	$3,63 \leq d < 4,60$
$\pm 0,050$	$1,66 \leq d < 2,05$	$2,78 \leq d < 3,43$	$4,60 \leq d < 5,67$
$\pm 0,060$	$2,05 \leq d < 2,94$	$3,43 \leq d < 4,94$	$5,67 \leq d < 8,17$
$\pm 0,070$	$2,94 \leq d < 4,01$	$4,94 \leq d < 6,73$	$8,17 \leq d \leq 11,12$
$\pm 0,080$	$4,01 \leq d < 5,23$	$6,73 \leq d < 8,78$	$11,12 \leq d \leq 13,00$
$\pm 0,090$	$5,23 \leq d < 6,62$	$8,78 \leq d \leq 11,12$	–
$\pm 0,100$	$6,62 \leq d < 8,17$	$11,12 \leq d \leq 13,00$	–
$\pm 0,120$	$8,17 \leq d \leq 11,76$	–	–
$\pm 0,140$	$11,76 \leq d \leq 13,00$	–	–

# LOW-CARBON GENERAL PURPOSE STEEL WIRE, NON HEAT-TREATED

TU U 27.3-05393145-001-2004, DSTU EN 10218-2-2001

without coating, precision class I, T1, T2, T3

Nominal diameter, mm	Wire diameter tolerance, mm (normal precision)	Tensile strength, N/mm <sup>2</sup> (kg/mm <sup>2</sup> )	Type of shipment – coils weight, kg
0,25 – 0,55	-0,02	690-1370 (70-140)	Plastic spools K-250A net weight up to 20
0,56 – 0,65	-0,04	690-1270 (70-130)	small coils of free winding of 20-40; heavy coils 550±50; 950±50 of conic winding
0,6 – 0,75	-0,02	690-1270 (70-130)	
0,8 – 1,0	-0,05	690-1270 (70-130)	small coils of free winding of 25-80; heavy-weight coils of 550±50; 950±100; heavy-weight coils of 950±50 of conic winding; coils of "Rosette" type 150±10; up to 300
1,1 – 1,2	-0,06	590-1270 (60-130)	
1,3 – 1,5	-0,10	590-1180 (60-120)	
1,6 – 2,0	-0,10	590-1180 (60-120)	small coils of free winding of 30-80; 100 ±10; heavy-weight coils of 950±50; coils of "Rosette" type up to 800
2,2 – 2,5	-0,12	590-1180 (60-120)	
2,8 – 3,2	-0,12	540-1080 (55-110)	
3,5 – 4,5	-0,16	440-930 (45-95)	small coils of free winding of 50-80; 100 ±10; heavy-weight coils of 950±50; 1950±100 coils of "Rosette" type up to 800
5,0 – 6,0	-0,16	390-830 (40-85)	
5,5 – 10,0	-0,16	390-600 (40-61)	heavy-weight coils of 300-500; 950±50; 1950±100, 2950±100
6,1 – 10,0	-0,20	390-700 (40-71)	
10,0 – 13,0	-0,20	390-700 (40-71)	

By the additional agreement with the Supplier the production of the wire with intermediate diameters is possible.

At the customer's request it is possible to produce wire with more strict requirements regarding the geometry and tensile strength.

The production of the wire with two-sided ultimate deviation is possible.

STEEL GRADE: St1, St2, St3 of all degrees of deoxidization are according to DSTU 2770-94;

1006, 1008, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018. 1020, 1021, 1022 are according to SOU MPP 77.140-236;

C4D, C7D, C9D, C10D, C12D, C15D, C18D, C20D according to DSTU EN 10016

The Wire of diameters from 2,0 up to 6,0 mm can be supplied in cut and length from 0,2 up to 6,0 meter.

The Wire to be tied in bundles of various weights those to form into a transport package up to 1000 kg.

# LOW-CARBON GENERAL PURPOSE STEEL WIRE, HEAT-TREATED

TU U 27.3-05393145-001-2004, DSTU EN 10218-2-2001

Without coating, precision class I, T1, T2, T3

Nominal diameter, mm	Wire diameter tolerance, mm	Tensile strength, N/mm <sup>2</sup> (kg/mm <sup>2</sup> )	Relative elongation, %, not less	Type of shipment – coils weight, kg
0,5 – 0,75	-0,04	290-490 (30-50)	15	small coils of free winding of 20-40
0,8 – 1,0	-0,05		15	small coils of free winding of 25-80; heavy-weight coils of 550±50; heavy-weight coils of 950±50 of conic winding; coils of "Rosette" type up to 300
1,1 – 1,2	-0,06		15	
1,3 – 1,5	-0,10		15	
1,6 – 2,0	-0,10		15	small coils of free winding of 30-80; 100 ±10; heavy-weight coils of 950±50; 1950±100 coils of "Rosette" type up to 800; coils of "Brehmen rings" type of 20-40
2,2 – 2,5	-0,12		15	
2,8 – 3,2	-0,12		15	
3,5 – 4,5	-0,16		15	
5,0 – 6,0	-0,16		20	
7,0 – 10,0	-0,20		20	
11,0 – 13,0	-0,20		20	coils of free winding of 300-500

The production of the wire with two-sided ultimate deviation is possible. The diameter tolerance should correspond to the values, stated in the table.

By the additional agreement with the Supplier the production of the wire with intermediate diameters is possible.

At the customer's request it is possible to produce the wire with more strict requirements regarding the geometry and tensile strength, without oxide scale in the "light annealing" mode.

**The production of oiled wire is possible.**

STEEL GRADE: St1, St2, St3 of all degrees of deoxidization are according to DSTU 2770-94;

1006, 1008, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1020 are according to SOU MPP 77.140-236;

C4D, C7D, C9D, C10D, C12D, C15D, C18D, C20D are according to DSTU EN 10016

The Wire of diameters from 2,0 up to 6,0 mm can be supplied in cut and length from 0,5 up to 6,0 meter.

The Wire to be tied in bundles of various weights those to form into a transport package up to 1000 kg.

## DIMENSIONS OF COILS AND PACKAGES of low-carbon steel wire

### \* coils of free winding

Wire diameter, mm	Coil weight, kg	Outer diameter of coil, mm	Inner diameter of coil, mm	Height, mm	Quantity of coils in package, pcs.	Outer diameter of package, mm	Inner diameter of package, mm	Height of package, mm
0,5 – 1,5	25	440 ±10	250 ±10	100 ±10	8	460 ±10	220 ±10	520 ±20
						440 ±10*	240 ±10*	700 ±30*
	50	450 ±10	230 ±10	140 ±10	6	470 ±20	200 ±20	430 ±30
						450 ±10*	230 ±10*	610 ±20*
	80	460 ±20	220 ±20	200 ±20	5	470 ±20	200 ±20	480 ±30
						450 ±10*	230 ±10*	780 ±40*
1,0 – 1,5	550 ± 50	710 ±10	450	420 ±10				
0,6 – 1,5	950±50 are of conic winding	top 700 ±10	355	580				
		base 745 ±10						
1,6 – 2,8	50	620 ±20	470 ±20	80 ±20	8	640 ±20	440 ±20	480 ±60
						630 ±20*	410 ±20*	850 ±30*
	80	650 ±20	460 ±20	130±20	5	700 ±20	410 ±20	460 ±60
						660 ±20*	420 ±20*	700 ±60*
	100 ± 10	660 ± 20	460 ±20	150 ±20	5	700 ±20	410 ±20	460 ±60
						660 ±20*	420 ±20*	700 ±60*
3,0 – 6,0	50	620 ±20	470 ±20	90 ±20	8	640 ±20	440 ±20	510 ±60
						630 ±20*	410 ±20*	870 ±30*
	80	650 ±20	460 ±20	140 ±20	5	700 ±20	410 ±20	510 ±60
						660 ±20*	420 ±20*	720 ±60*
	100 ± 10	660 ±20	460 ±20	160 ±20	5	700 ±20	410 ±20	510 ±60
						660 ±20*	420 ±20*	720 ±60*
1,6 – 6,0	950 ± 100	830 ± 20	450 ± 10	440 ± 20				
2,4 – 10,0	1950±100	960±20	500±10	650±20				
	2950±100	1050±20	620±10	840±20				
5,5 – 8,0	80-300	750	500	80-300				
5,5 – 10,0	80-300	850	600	80-300				
6,0 – 13,0	500	1100±100	520 ±20	400				

### Coils of "Rosette" type of the following sizes

Parameter	Rosette Size		
Wire diameter, mm	0,8 – 1,5	1,6 – 4,0	
Weight, kg	150±10	500±10	1000±10
Outer Diameter, mm	450 ±10	810 ±10	810 ±20
Inner diameter, mm	225 ±20	370 ±10	370 ±10
Height, mm	480 ±20	430 ±20	900 ±20

### Plastic spools K-250A

Wire diameter, mm	Coil weight, kg	Outer diameter of coil, mm	Inner diameter of coil, mm	Height, mm	Inner diameter of spool, mm
0,25-0,55	до 20	250	160	200	36

## Production of heat-treated wire is possible in coils of rectangular section – “Brehmen rings”

with the following technical requirements:

- diameters from 2,00 up to 5,00 mm; wire oiled/not oiled;
- tensile strength 300-400 N/mm<sup>2</sup>;
- The production of oiled wire is possible.

Overall dimensions of coils “Brehmen rings”:

Coil weight, kg	Inner diameter, mm	Outer diameter, mm	Height, mm
20	100	250	100
30	210	310	150+2
40	210	330+5	150+2

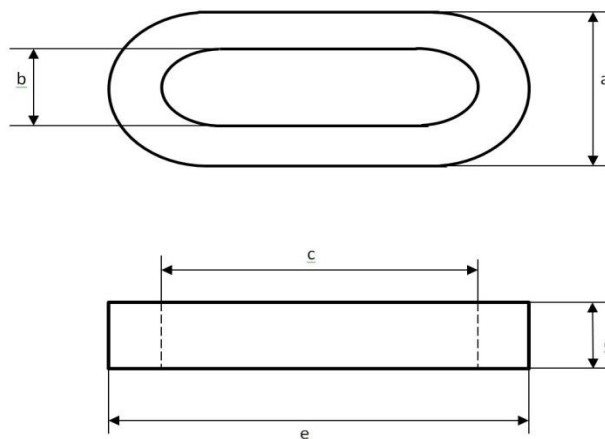
Delivery: coils weight – “Brehmen rings” - on pallet 960 kg, 1080 kg.

## Production of heat-treated wire is possible in coils with a special form winding of weight 200 grams

with the following technical requirements:

- diameters from 1,2 mm; 1,4 mm; 1,6 mm; wire not oiled;
- tensile strength 300-490 N/mm<sup>2</sup>;

Overall dimensions of coils with a special form winding of weight 200 grams:



Sizes acc. to drawing in **mm**

a	b	c	d	e
44-52	17-20	39-43	23-26	65-70

**Type of packaging:** plastic buckets of 20 kg (100 coils)

**Type of shipment:** on pallet, net weight 720 kg (36 buckets)



**PACKAGING:**

Type of shipment	Weight, kg	Material or combination of materials for packing
Plastic spools K-250A	up to 20	Without additional packing
		Stretch
Coil	20-100	Without additional packing
		Stretch (for wire diam (0,5-0,8) mm
		polyethylene film
		inhibited film
Package coils Heavy-weight coil Heavy-weight coil (conical winding) Heavy-weight coil  "Rosette"	180-500	Without additional packing
	550±50	Stretch (for heavy-weight coils of conical winding
	950±50	polyethylene film
	950±50	inhibited film
	1950±100	polypropylene sleeve
	up to 1000	inhibited film + polypropylene sleeve
	up to 1000	polyethylene film + polypropylene sleeve
	two-layer sleeve (polypropylene with inhibited paper)	

# STEEL LOW-CARBON ZINC-COATED WIRE AND STEEL WIRE ZINC-ALUMINUM COATED

TU U 27.3-05393145-001-2004, DSTU EN 10244-2

Wire precision class I, T1, T2, T3

Nominal Wire diameter with coating, mm	Tensile strength, N/mm <sup>2</sup> , max <sup>1)</sup>		Relative elongation of heat-treated wire, %, not less 2)	Packaging/weight, kg
	Heat-untreated	Heat-treated		
0,40	690 - 1370			Spools K-250A up to 20
≥0,60 ≤ 0,80	690 - 1000			Coils (20-60, up to 500) in packages up to 500
> 0,80 ≤ 1,00	690 - 1000			Coils 20-60, up to 500
0,80	690 - 1270	340 - 540	12	Coils type "Rosette" up to 400 Coils type "Rosette" up to 50 packed in coils «Sandwich» up to 400
> 0,80 ≤ 1,00	690 - 1270	340 - 540	12	
> 1,00 ≤ 1,20	590 - 1270	340 - 540	12	
> 1,20 ≤ 1,40	590 - 1180	340 - 540	12	
≥ 1,20 ≥ 1,60	590 - 1180	340 - 540	12	
> 1,40 ≤ 2,15	590 - 1180	340 - 540	12	Coils of special shape 0,2
> 2,15 ≤ 2,50	590 - 1180	340 - 540	12	
> 2,50 ≤ 2,72	540 - 1080	340 - 540	18	
> 2,72 ≤ 3,20	540 - 1080	340 - 540	18	
> 3,20 ≤ 3,60	440 - 930	340 - 540	18	
> 3,60 ≤ 4,50	440 - 930	340 - 540	18	
> 4,50 ≤ 5,50	390 - 830	340 - 540	18	
> 5,50 ≤ 6,00	390 - 830	340 - 540	18	
> 6,00 ≤ 9,00	390 - 730	340 - 540	18	

**1), 2) – or at the Customer's requirement**

**Tolerance deviations of wire diameter upon Customer's agreement**

STEEL GRADE: St1, St2, St3 of all degrees of deoxidization are according to DSTU 2770-94;

1006, 1008, 1010, 1011, 1012, 1013, 1015, 1016, 1017, 1018, 1021, 1022 are according to SOU MPP 77.140-236;

C4D, C7D, C9D, C10D, C12D, C15D, C18D, C20D are according to DSTU EN 10016

**MINIMUM ZINC MASS PER UNIT AREA OF WIRE SURFACE**  
**according to TU U 27.3-05393145-001-2004**

Nominal Wire diameter with coating, d, mm	Zinc coating , gr/m <sup>2</sup>			
	Class			
	1	2	C	D
0,40	10	–	30	15
0,40 < d < 0,50	20	–	30	15
0,50	20	–	35	20
0,50 < d < 0,60	30	–	35	20
0,60 ≤ d ≤ 0,63	30	–	40	20
0,63 < d < 0,70	30	40	40	20
0,70 ≤ d < 0,80	30	40	45	20
0,80	30	40	50	20
0,80 < d ≤ 0,85	35	60	50	20
0,85 < d < 0,90	35	75	50	20
0,90 ≤ d < 1,00	35	75	55	25
1,00	35	75	60	25
1,00 < d < 1,20	40	75	60	25
1,20	40	75	65	25
1,20 < d < 1,40	50	80	65	25
1,40 ≤ d ≤ 1,60	50	80	70	30
1,60 < d < 1,65	50	90	70	30
1,65 ≤ d < 1,85	50	90	75	30
1,85 ≤ d < 2,15	50	90	80	40
2,15 ≤ d ≤ 2,43	60	100	85	45
2,43 < d ≤ 2,72	60	120	95	45
2,72 < d ≤ 2,80	70	120	100	50
2,80 < d < 3,20	70	135	100	50
3,20 ≤ d ≤ 3,60	70	135	105	60
3,60 < d < 3,80	80	155	105	60
3,80 ≤ d < 4,40	80	155	110	60
4,40 ≤ d < 5,20	80	155	110	70
5,20 ≤ d ≤ 5,50	80	155	110	80
5,50 < d ≤ 6,00	85	155	110	80

**MINIMUM ZINC MASS PER UNIT AREA OF WIRE SURFACE**  
**according to DSTU EN 10244-2**

Nominal Wire diameter with coating, d, mm		Zinc coating , gr/m <sup>2</sup>				
		Class				
<i>From</i>	<i>Up to</i>	<i>A</i>	<i>AB</i>	<i>B</i>	<i>C</i>	<i>D</i>
0,80	0,89	145	100	70	50	20
0,90	0,99	155	110	70	55	25
1,00	1,19	165	115	80	60	25
1,20	1,39	180	125	90	65	25
1,40	1,64	195	135	100	70	30
1,65	1,84	205	145	100	75	30
1,85	2,14	215	155	115	80	40
2,15	2,49	230	170	125	85	45
2,50	2,79	245	185	125	95	45
2,80	3,19	255	195	135	100	50
3,20	3,79	265	210	135	105	60
3,80	4,39	275	220	135	110	60
4,40	5,19	280	220	150	110	70
5,20	8,19	290			110	80
8,20	9,00	300			110	80

**COATING MASS OF ALLOY OF ZINC-ALUMINUM OF TYPE Zn95Al5 PER UNIT AREA**  
**ACCORDING TO DSTU EN 10244-2**

Nominal Wire diameter with coating, d, mm		Zinc coating , gr/m <sup>2</sup>		
		<i>A</i>	<i>AB</i>	<i>B</i>
<i>From</i>	<i>Up to</i>			
1,60	1,64	195	135	100
1,65	1,84	205	145	100
1,85	2,14	215	155	115
2,15	2,49	230	170	125
2,50	2,79	245	185	125
2,80	3,19	255	195	135
3,20	3,79	265	210	135
3,80	4,39	275	220	135
4,40	5,19	280	220	150
5,20	6,00	290		

**PACKAGING:**

Type of shipment	Weight, kg	Material or combination of materials for packaging
Coils of special shape	20 (0,2x100)	Plastic buckets
Plastic spools K-250A	Up to 20	Without additional packaging
		Stretch
Coils	Up to 1000	Without additional packaging
		Stretch
		Polypropylene sleeve
		Film with anticorrosion covering (inhibited) + polypropylene sleeve
Package of Coils of free winding	Up to 500	Every coil into Film with anticorrosion covering (inhibited) + package into polypropylene sleeve
«Rosette» «Rosette-sandwich»	Up to 1500	Without additional packaging
		Polypropylene sleeve
		Film with anticorrosion covering (inhibited) + polypropylene sleeve
		Polyethylene sleeve

**DIMENSIONS OF COILS AND SPOOLS**

Parameter	Nominal size of coils							
	«Rosette», «Rosette-sandwich»			Free winding		Cylindrical shaped	Special shape *	Spool K-250A
Wire diameter, mm	0,8 - 1,4	1,4 - 6,0	5,0 - 9,0	0,6 - 1,0	0,6 - 1,0	0,6 - 1,0	0,40	0,8 - 1,4
Weight of coil, kg	up to 400	up to 900	up to 1500	up to 20	up to 60	up to 500	0,200	up to 20
Outer diameter, mm	600 ±20	800 ±30	1300 ±50	440 ±10	450 ±10	710 ±10		250
		1000 ±20						
Inner diameter, mm	320 ±20	410 ±10	600 ±30	250 ±10	230 ±10	450 ±10		160
		430 ±20	800 ±30					
Height, mm	up to 700	up to 1000	up to 1200	90 ±10	150 ±10	420 ±10		200
Height of wire winding max, mm								160
Hole diameter, mm								36
<b>a</b> , mm							44 - 52	
<b>b</b> , mm							17 - 20	
<b>c</b> , mm							39 - 43	
<b>d</b> , mm							23 - 26	
<b>e</b> , mm							65 - 70	

\* drawing (is on the page 7) of coil with special shape winding of weight 200 grams

# CARBON STEEL SPRING WIRE

DSTU ISO 8458:2007, EN 10270-1:2011 (DIN 17223)

## Normal accuracy of production

Nominal diameter, mm	Wire diameter tolerance (normal precision), mm	Tensile strength, N/mm <sup>2</sup>		Type of shipment – coils weight, kg
		class SL	class SM (DM)	
0,80	±0,020		2050-2300	heavy-weight coils of conic winding 550±50; 950±50;
0,85			2030-2280	
0,90			2010-2260	
0,95			2000-2240	
1,00			1720-1970	
1,05	±0,025		1710-1950	1960-2220
1,10			1690-1940	1950-2190
1,20			1670-1910	1920-2160
1,25			1660-1900	1910-2130
1,30			1640-1890	1900-2130
1,40			1620-1860	1870-2100
1,50			1600-1840	1850-2080
1,60			1590-1820	1830-2050
1,70	±0,030		1570-1800	1810-2030
1,80			1550-1780	1790-2010
1,90			1540-1760	1770-1990
2,00			1520-1750	1760-1970
2,10	±0,030		1510-1730	1740-1960
2,25			1490-1710	1720-1930
2,40			1470-1690	1700-1910
2,50			1460-1680	1690-1890
2,60			1450-1660	1670-1880
2,80	±0,030		1420-1640	1650-1850
3,00			1410-1620	1630-1830

**Note.** For intermediate wire diameters the specifications for the nearest larger diameter are applying.

STEEL GRADE: 45, 55, 70,80 are according to DSTU 3683-98;

C42D C52D, C72D, C82D are according to DSTU EN 10016-2:2006

As per the Customer's additional requirements, the wire production with other diameters according to GOST 9389-75 and other values of tensile strength are possible.

**MINIMUM ZINC MASS PER UNIT AREA OF WIRE SURFACE for spring wire according to DSTU EN 10244-2**

Nominal Wire diameter with coating, d, mm		Zinc coating , gr/m <sup>2</sup>				
		Class				
<i>From</i>	<i>Up to</i>	<i>A</i>	<i>AB</i>	<i>B</i>	<i>C</i>	<i>D</i>
0,80	0,89	145	100	70	50	20
0,90	0,99	155	110	70	55	25
1,00	1,19	165	115	80	60	25
1,20	1,39	180	125	90	65	25
1,40	1,64	195	135	100	70	30
1,65	1,84	205	145	100	75	30
1,85	2,14	215	155	115	80	40
2,15	2,49	230	170	125	85	45
2,50	2,79	245	185	125	95	45
2,80	3,0	255	195	135	100	50

**COATING MASS OF ALLOY OF ZINC-ALUMINUM OF TYPE Zn95Al5 PER UNIT AREA ACCORDING TO DSTU EN 10244-2**

Nominal Wire diameter with coating, d, mm		Zinc coating , gr/m <sup>2</sup>		
		<i>A</i>	<i>AB</i>	<i>B</i>
<i>From</i>	<i>Up to</i>			
1,60	1,64	195	135	100
1,65	1,84	205	145	100
1,85	2,14	215	155	115
2,15	2,49	230	170	125
2,50	2,79	245	185	125
2,80	3,00	255	195	135

**PACKAGING:**

Type of shipment	Weight, kg	Material or combination of materials for packing
Coil	up to 100	without additional packing
		polyethylene film
		Inhibited film
Package coils	up to 500	without additional packing
		polyethylene film
		inhibited film
Heavy-weight coil	550±50	polypropylene sleeve
Heavy-weight coil	950±50	inhibited film + polypropylene sleeve
Rosette	up to 6000	polyethylene film + polypropylene sleeve
		two-layer sleeve (polypropylene with inhibited paper)

# STEEL WELDING WIRE

GOST 2246-70, TU U 24.3-05393145-012:2020, EN ISO 14341:2011

Wire grade	Wire diameter, mm	Maximum deviations of the wire:		Type of delivery - in coils weight, kg
		for welding (surfacing)	for electrodes production	
Low-carbon Sv-08, Sv-08A for electrode production	0,8	-0,07	-	80
	1,0-1,2	-0,09	-	80
	1,4		-	80; 550±50
	1,6	-0,12	-0,06	80
	1,8-2,0		-0,09	80; 950±100
	2,5-3,0		-0,09	80; 950±100
	3,5-6,0	-0,16	-0,12	80; 950±100
Alloyed Sv-08G2S	0,8	-0,07	-	1; 2,5; 5; 15; 18; 80
	1,0-1,4	-0,09	-	1; 2,5; 5; 15; 18; 80
	1,6-2,0	-0,12	-	15; 18; 80
Copper-coated Sv-08G2S	0,8	-0,07	-	1; 2,5; 5; 15; 18; 80
	1,0-1,4	-0,09	-	1; 2,5; 5; 15; 18; 80
	1,6	-0,12	-	15; 18; 80
Copper-coated 4Si1 (EN ISO 14341)	0,8	-0,04	-	1; 2,5; 5; 15; 18; 80
	1,0-1,4		-	1; 2,5; 5; 15; 18; 80
	1,6		-	15; 18; 80

At customer's demand it is possible to produce wire of the other diameters

## CHEMICAL COMPOSITION OF STEEL:

Wire grade	Chemical composition, %							
	Mn	C	Si	Cr	Ni	S	P	Al
	not more							
Low-carbon Sv-08	0,35-0,6	0,10	0,03	0,15	0,30	0,04	0,04	0,01
Low-carbon Sv-08A	0,35-0,6	0,10	0,03	0,12	0,25	0,03	0,03	0,01
Alloyed Sv-08GS	1,40-1,70	0,10	0,60-0,85	0,20	0,25	0,025	0,03	-
Alloyed Sv-08G2S	1,80-2,10	0,05-0,11	0,7-0,95	0,20	0,25	0,025	0,03	-
4Si1 (EN ISO 14341)	1,60-1,90	0,06-0,14	0,80-1,20	0,15	0,15	0,025	0,025	0,02

## MECHANICAL PROPERTIES OF ALLOYED WIRE:

Wire diameter, mm	Tensile strength, Mpa (kgs/mm <sup>2</sup> )	
	for welding (surfacing)	for electrode production
0,8-1,5	882-1323 (90-135)	-
1,6	882-1274 (90-130)	686-980 (70-100)
2	784-1176 (80-120)	686-980 (70-100)
more than 2,0	686-1029 (70-105)	637-931 (65-95)



## CARBON STEEL WIRE FOR COLD-HEADING

### GOST 5663-79

Normal accuracy of production, 1 or 2 groups of mechanical properties

Wire range

Steel grade	Nominal diameter, mm	Maximum deviations of wire diameter (normal accuracy), mm	Tensile strength N/mm <sup>2</sup> (kgs/mm <sup>2</sup> )		Contraction ratio, %, not less	
			1 class	2 class max	1 class	2 class
10, 10kp	2,0-3,0	- 0,06	440-590 (45-60)	590 (60)	55	55
	more then 3,0-6,0	- 0,08				
15, 15kp, 20, 20kp	2,0-3,0	- 0,06	470-620 (48-63)	640 (65)	55	50
	more then 3,0-6,0	- 0,08				

STEEL GRADES: 10, 10kp, 15, 15kp, 20, 20kp according to DSTU 3684-98

Production of steel wire is possible according to GOST 5663-79 of steel grades 10, 10kp, I class with tensile strength (420-570) N/mm<sup>2</sup> (43-58) kgs/mm<sup>2</sup>

#### PACKAGING:

coils of weight up to 100kg (diam. (2,0-5,20) mm); (320±20) kg (for diam. higher 5,20 mm);  
coils type "Rosette" of weight (500±50) kg (for diam. less 4,0 mm);  
heavy-weight coil of weight (500±50; 900±50;)

## CARBON STRUCTURAL STEEL WIRE

### GOST 17305-91

According to the mechanical properties the wire is produced of the 1st or 2nd group

Steel grade	Nominal diameter, mm	Maximum deviations of wire diameter (normal accuracy), mm	Tensile strength N/mm <sup>2</sup> (kgs/mm <sup>2</sup> )		Quantity of bends	
			Group 2	Group 1	Group 2	Group 1
			Not less			
10, 10kp	more then 6,0	- 0,09	590 (60)	390 (40)	9	8
15, 15kp, 20, 20kp			590 (60)	440 (45)	7	6

STEEL GRADES: 10, 10kp, 15, 15kp, 20, 20kp are according to DSTU 3684-98

PACKAGING: coils of weight (320±20) kg

## TWO-BASIC BARBED WIRE, ZINC COATED, "IOWA" TYPE

TU U 27.1-136-001-2002

Quality parameters of the barbed wire correspond to the requirements of EN 10223-1 except for zinc content requirements and there are also additional requirements, depending on market demands.

The barbed wire is produced from zinc-coated wire according to GOST 3282-74 class 1, normal accuracy of production, with tensile strength 400-500 N/mm<sup>2</sup>

The barbed wire consists of two twisted together wires in one direction with the same twists step equal to (50±10 mm).



### THEORETICAL WEIGHT AND LENGTH OF BARBED WIRE:

Wire diameter for strand, mm	Wire diameter for barbs, mm	Distance between Barbs, mm	Theoretical weight of 1m of wire, g	Coil weight , kg/ length of wire in coil, m			
				10	15	20	30
1,6	1,6	127	44	227	341	455	682
1,6	1,6	102	46	217	326	435	652
1,7	1,5	152	46	217	326	435	652
1,7	1,5	127	47	213	319	426	638
1,7	1,5	102	49	204	306	408	612
2	2	152	67	149	224	299	448
2	2	127	69	145	217	290	435
2	2	102	73	137	206	274	411
2,2	2	152	79	127	190	253	380
2,2	2	127	81	123	185	247	370
2,2	2	102	85	118	176	235	353
2,2	2,2	152	82	122	183	244	366
2,2	2,2	127	85	118	176	235	353
2,2	2,2	102	90	111	167	222	333
2,5	2	152	99	101	152	202	303
2,5	2	127	101	99	148	198	297
2,5	2	102	105	95	143	190	286
2,5	2,5	152	107	94	140	187	280
2,5	2,5	102	117	85	128	171	256

STEEL GRADE: St1, St2 of all degrees of deoxidization are according to DSTU 2770-94;

1006, 1008 are according to SOU MPP 77.140-236

**Delivery:** coils weight of 10-30kg., packed on pallet, net weight 600-720kg

**Wire length in coil:** 100m, 200m, 250m or 400m.

## COILS DIMENSIONS:

Weight, kg	10	15	20	30
Outer Diameter , mm	230±10	260±10	280±10	380±10
Inner diameter, mm	135	135	135	135
Height, mm	310	310	310	310

At the customer's request the coils of the other weight and length are possible.

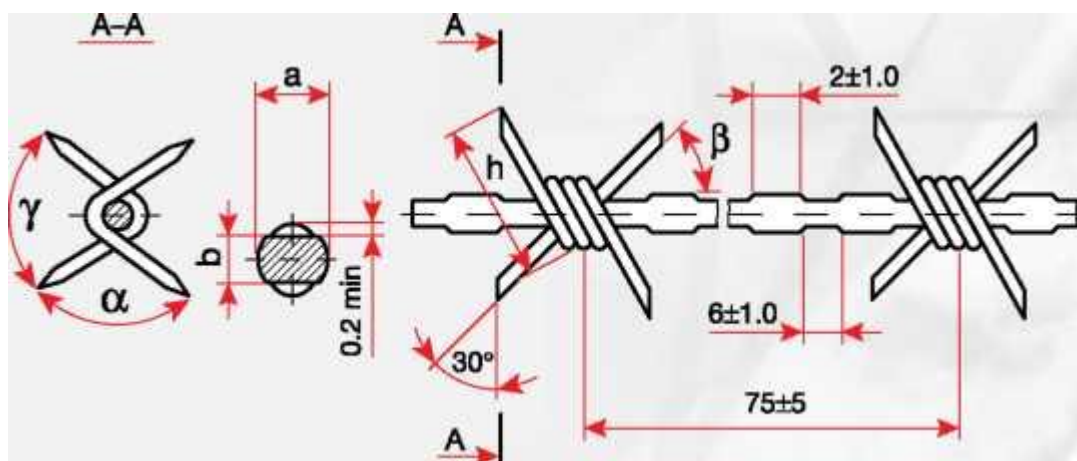
It is possible to manufacture the coils with handle.

Availability of zinc coating and special fixing of the barbs guarantee the long-term life and performing of all specific requirements for this type of product.

## ONE-BASIC CORRUGATED BARBED WIRE

### GOST 285-69

Zinc-coated, 1 class, normal accuracy of production



Note: a - not less than 2,8 mm; b - not less than 2,3 mm; h - less 17 mm.

Corners  $\alpha$ ,  $\beta$ ,  $\gamma$  - not less than 30 °

### MAIN PARAMETERS:

Components of one-basic barbed wire	Wire diameter, a, mm	Diameter deviations max, mm	Zinc coating, g/m <sup>2</sup> , not less
Basis	2,8	±0,10	80
Barb	2	±0,12	60

STEEL GRADE: St1, St2 of all degrees of deoxidization are according to DSTU 2770-94;

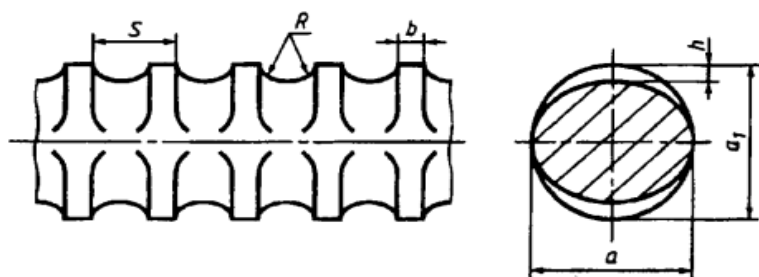
1006, 1008 are according to SOU MPP 77.140-236

**DELIVERY:** coils weight of 35±2 kg, wire length in coil - 400 meters.

At the customer's request the coils of the other weight and length are possible.

# REINFORCEMENT CONCRETE WIRE

TU U DP 24.3-02070766-001:2014



**Purpose:** The wire is used for the production of welded mesh with nonnormable strength.

## MECHANICAL PROPERTIES:

Wire diameter, mm (d)	Breaking load, N (kgs)	Linear density, kg, max
2,20	191 (195)	0,029
2,30	211 (215)	0,033
2,40	225 (230)	0,035
2,50	245 (250)	0,039
2,65	274 (280)	0,043
2,70	284(290)	0,045
2,80	309 (315)	0,048
3,00	353(360)	0,055
3,20	402 (410)	0,063
3,50	480 (490)	0,076
3,70	539 (550)	0,084
3,80	568 (580)	0,089
4,00	627 (640)	0,099
4,20	696 (710)	0,109
4,50	794 (810)	0,125
4,60	833 (850)	0,130
4,80	907 (925)	0,142
5,00	980 (1000)	0,154
5,50	1186 (1210)	0,187
5,80	1323 (1350)	0,207
6,00	1416 (1445)	0,222

**STEEL GRADE:** St1, St2, St3 of all degrees of deoxidization are according to DSTU 2770-94;

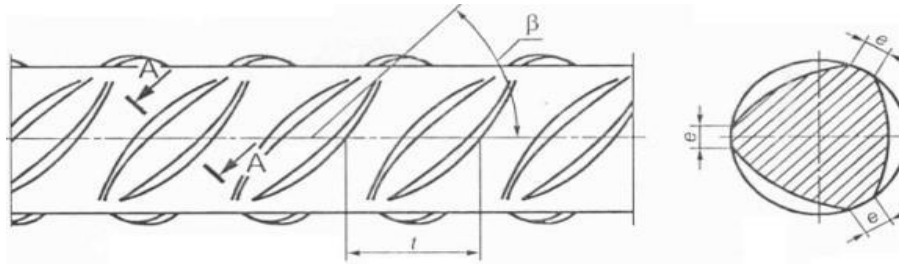
1006, 1008, 1018 are according to SOU MPP 77.140-236

**DELIVERY:** coils up to 1000 kg or bars up to 6 m., package of weight up to 300 kg.

# COLD-DEFORMED REINFORCING STEEL B500C FOR CONCRETE CONSTRUCTION REINFORCEMENT

TU U DP 24.3-02070766-002:2015; DSTU EN 10080:2009; EN 10080; ISO 10544

*B500C - mechanically-reinforced cold-rolled (i.e. cold-formed)  
\* Index "C" – welded*



Cold-formed reinforcing steel B500C for concrete construction reinforcement with three-sided die-rolled section of diam. range 4,0mm up to 8,0mm is produced from carbon steels of general purpose, and has tensile strength min. 500N/mm<sup>2</sup>.

*Advanced manufacturing technology of reinforcement class B500C implemented on PrJSC "Dneprometiz" allows to produce steady reinforcement with required characteristics in the range from 4,0 to 8,0mm, with any intermediate diameter.*

## Application

The high level of strengthening characteristics ( $\sigma_{0,2} \geq 500 \text{ N/mm}^2$ ,  $\sigma_b \geq 550 \text{ N/mm}^2$ ) allows to apply rolled steel according to current TU mutually and instead of the other classes of wire and bars reinforcing of rated diameters, including. A- I ... A-III in accordance with GOST 5781-82; At500C and At400C in accordance with GOST 10884-94, and also reinforcing wire of a class of VP-1 (GOST 6727-80).

Furthermore, applying of reinforcing steel class B500C of rated diameter instead of other classes stated above is performed without conversion of reinforcing and coordination with project organizations that is an important factor of production costs reduction and increasing of reliability of steel reinforcement concrete of constructions objects. For the reinforcement of tensile strength 500, the introduction of intermediate sizes in range from 5,5 to 12 mm allows to save steel up to 16% and to solve the problem of interchangeability of working (estimated) reinforcement of one tensile class with reinforcement of the other class.

Rolled steel according to the current TU U DP 24.3-02070766-002:2015 is intended for reinforcement of steel concrete constructions in standard industrial floors, strip foundations, **roadway paving**, operated in the open air, in heated and not heated locations.

## Technical characteristics

Nominal diameter, $d_H$ , mm	Rated cross-section area $F_H$ , mm <sup>2</sup>	Rated weight 1m length m, kg	Permitted weight deviations 1m length % %
4,0	12,60	0,099	± 4,5
5,0	19,63	0,154	
6,0	28,27	0,222	
7,0	38,50	0,303	
8,0	50,26	0,395	
Note : Weight of 1 running meter is calculated proceeding from rated steel density (7,85g/cm <sup>3</sup> )			

The reinforcement is supplied with accurate rolling marking – stamping a trademark "DM" of the manufacturer PrJSC "Dneprometiz" on one side of the profile.

## Main geometries of the reinforcing steel

Profile number (nominal diameter) mm	Height of lug $h$ , mm	Pitch of lug $c$ , mm	Relative pitch of lug $c/b$ , not less	Total interval between ends of transverse ribs $\Sigma a$ , mm, max	Relative area of profile's transverse ribs deformation $f_R$ , not less, mm	Ovality of rolling, mm, max
4,0	0,20-0,40	1,6-4,0	3	3,14	0,036	0,5
5,0	0,25-0,50	2,0-5,0		3,93	0,039	0,5
6,0	0,30-0,60	2,4-6,0		4,71	0,039	1,0
7,0	0,35-0,70	2,8-7,0		5,50	0,045	1,0
8,0	0,40-0,80	3,2-8,0		6,28	0,045	1,0

Slope angle of transverse rib  $\beta = (35-60)^\circ$ . Slope angle of lateral surface of transverse rib  $\alpha = (45-60)^\circ$

## Mechanical and technological properties

Description and properties	Value index	Allowed probability of assurance
	Not less	
Conventional yield strength, $\sigma_{0,2}$ , MPa	500	0,90
Tensile strength $\sigma_B$ , MPa	550	0,95
Ratio $\sigma_B/\sigma_{0,2}$	1,05	0,95
Total relative elongation at maximum stress, $A_{gt}$ , %	2,5	0,90
Quantity of bends on 180 degrees round arbor of diam. $3d_H$ :		
-for rolling of rated diameter 4,0-4,5mm	4	-
-for rolling of rated diameter 5,0-5,5mm	5	-
Rolling of rated diameter 6,0-8,0 mm should pass bending test on angles 180 and 90 degrees respectively round arbor of diameter equal $3d_H$ .	Absence of fractures and cracks	-

STEEL GRADE: St1kp, St1ps, St3ps are according to DSTU 2770-94; 1006, 1008, 1018 are according to SOU MPP 77.140-236; C4D, C7D, C18D are according to DSTU EN 10016

### PACKAGING:

- Coils of weight up to 3000 kg
- Bars length (L) from 1,0 up to 6,0 m., package of weight up to 300 kg.

### Overall dimensions and weight of coils

Type of shipment	Weight, kg	Inner diameter	Outer diameter	Height
Heavy-weight coil	550±50	650±10	830±20	440±20
	950±50	450±10	830±20	440±20
	1950±100	500±10	960±20	650±20
	2950±100	620±10	1050±20	840±20

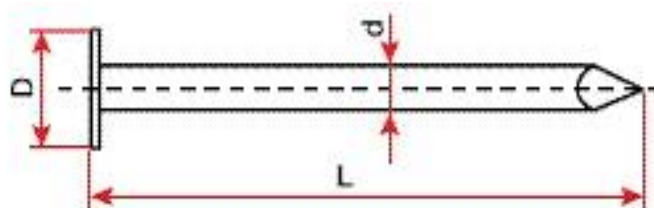
When forming a transport package in bars, each package is tied tightly in three places by wire rod of diameter 5,5 - 8,0mm. On each coil or package at least two clamps are fasten for fixing the strops of crane mechanisms providing the mechanized loading and unloading of the goods.

## CONSTRUCTION NAILS WITH FLAT HEAD

DSTU GOST 4028:2008

TU U 28.7-05393145-005:2006

Grade 1, a class I



### PARAMETERS OF NAILS WITH THE FLAT HEAD:

Nominal diameter of a nail rod, dia, mm	Length of a nail, L, mm			Maximum deviations, mm ±	The minimum diameter of a head, d mm mines	The minimum height of a head, h, mm	Weight, piece kg/1000
	nom.	min.	max.				
1,2	16	14,6	17,2	1,2	2,4	0,7	0,147
1,2	20	16,6	21,2	1,2	2,4	0,7	0,183
1,2	25	23,6	26,2	1,2	2,4	0,7	0,219
1,4	25	23,6	26,6	1,4	2,6	0,6	0,302
1,4	32	30,6	33,4	1,4	2,6	0,6	0,385
1,4	40	36,6	41,4	1,4	2,6	0,6	0,482
1,6	32	30,2	33,6	1,6	3,6	1,1	0,64

Note: flat-head surface is plain.

STEEL GRADE: St1 is according to DSTU 2770-94; 1006 is according to SOU MPP 77.140-236

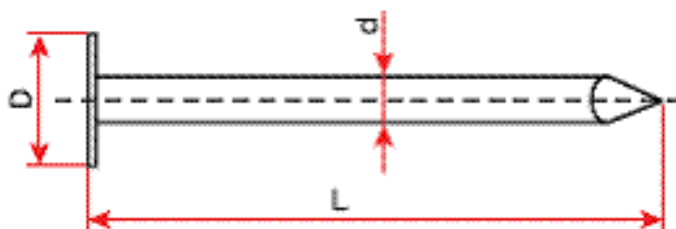
PACKAGING: Cardboard boxes of net weight 5; 10; 25 kg; up to 1000 kg

## ROUND CLOUT NAILS

DSTU GOST 4029:2008

TU U 28.7-05393145-005:2006

Grade 1, class I



### PARAMETERS:

Nominal diameter of a nail rod, dia, mm	Nail length L, mm			Maximum deviations, mm±	Head diameter D,mm, not less than	Head Height, h,mm, not less than	Approx. weight per 1000 nails, kg
	nom.	min.	max.				
2	20	18	22	2	5	0,5	0,482
2	25	23	27	2	5	0,5	0,605
2,5	32	29,5	34,5	2,5	6,25	0,63	1,22
2,5	40	37,5	42,5	2,5	6,25	0,63	1,52
3	40	37	43	3	7,5	0,75	2,23

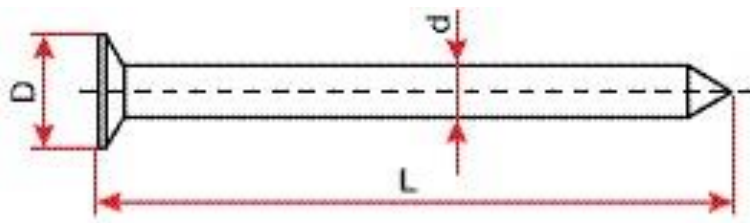
Note: Flat-head surface is plain and smooth.

STEEL GRADE: St1, St3 of all degrees of deoxidization are according to DSTU 2770-94; 1006 is according to SOU MPP 77.140-236

PACKAGING: Cardboard boxes of net weight 10; 25kg; up to 1000 kg

# CONSTRUCTION NAILS WITH CONIC CORRUGATED HEAD

TU U 28.7-136-007-2003



## ASSORTMENT OF NAILS WITH CONIC CORRUGATED HEAD

The nominal diameter of the nail rod, d nom.	1,8	2	2,2	2,4	2,5	2,7	2,8	3	3,1	3,4	3,5	3,8	4	4,2	4,4	4,5	4,6	5	5,5	6		
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
The nominal length of the nail, L	30	30	30	30																		
	32																					
	40	40	40	40	40	40																
	45																					
			50	50	50	50		50														
							55															
					60	60	60	60		60												
							65															
							70	70	70	70		70										
										75												
							80	80	80	80	80	80										
									90	90	90	90	90	90			90	90				
													100	100	100	100	100	100	100			
															110							
														115								
														120	120		120	120	120			
																			140	140		
																						150
																						160
																						180
																					200	
The nominal diameter of the nail head D nom.	3,5	4	4,4	4,8	5	5,4	5,6	6	6,2	6,4	7	7,1	7,5	7,8	7,9	8	8,3	9	10	11		
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	

Note: clearing of nails from oil (tumbling) is possible for the diameters from 2,0 mm up to 6,0 mm



## PARAMETERS OF NAILS WITH CONIC CORRUGATED HEAD

Nails Designation	Rod diameter, d, mm	Diameter tolerance, mm	Nail length, L	Length tolerance, mm	Min. diameter of the head, Dmin, mm	Weight kg/1000 pieces
1.8x32	1,8	±0.05	32	-3	3,5	0,64
2.0x40	2	±0.05	40	-3	4	0,949
2.0x50	2	±0.05	50	-3	4	1,19
2.5x50	2,5	±0.06	50	-3	5	1,87
2.5x60	2,5	±0.06	60	-4	5	2,23
3.0x70	3	±0.06	70	-4	6	3,77
3.0x80	3	±0.06	80	-4	6	4,33
3.5x90	3,5	±0.08	90	-6	7	6,6
4.0x100	4	±0.08	100	-6	7,5	9,5
4.0x120	4	±0.08	120	-6	7,5	11,5
5.0x120	5	±0.08	120	-6	9	17,8
5.0x150	5	±0.08	150	-7	9	21,9
6.0x150	6	±0.08	150	-7	11	32,4
6.0x200	6	±0.08	200	-10	11	43,1

STEEL GRADE: St1, St3 of all degrees of deoxidation are according to DSTU 2770-94;

1006 is according to SOUMPP 77.140-236

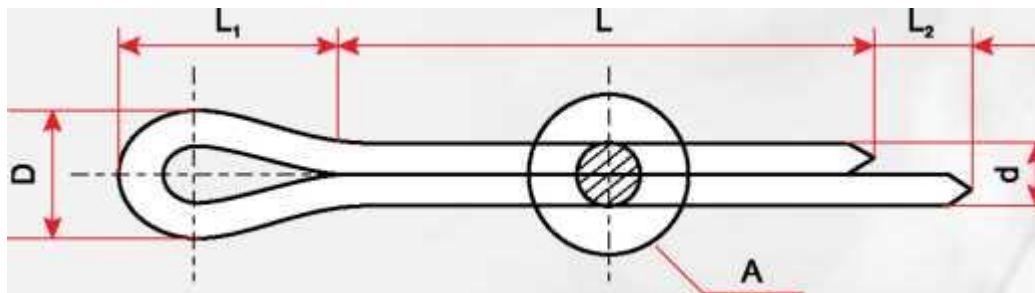
### PACKAGING:

- Cardboard boxes of net weight 25 kg;
- Cardboard boxes up to 1000 kg;
- Cardboard boxes of net weight 2,5; 5 kg, packaged on the pallet, net weight 1000 kg (only for clean nails);

# SPLIT PINS

GOST 397-79

without coating



Nominal diameter of split pin, do		3,2	4	5	6,3	8	10	
Split pin diameter, d	max.	2,9	3,7	4,6	5,7	7,6	9,5	
	min.	2,7	3,5	4,4	5,7	7,3	9,3	
End length, L2	max.	3,2	4	4	4	4	6,3	
	min.	1,6	2	2	2	2	3,2	
Head length, L1		6,4	8	10	12	16	20	
Head diameter, D	max.	5,8	7,4	9,2	11,8	15	19	
	min.	5,1	6,5	8	10,3	13,1	16,6	
Split pin length, L, mm	Theoretical weight of 1000 pcs., kg							
18		1,27						
20		1,37						
22		1,46	2,55					
25		1,61	2,79					
28		1,75	3,03	4,93				
32		1,96	3,35	5,43				
36		2,14	3,67	5,93	10,7			
40		2,33	3,99	6,43	11,5			
45		2,58	4,39	7,05	12,5			
50		2,82	4,79	7,8	13,6	23,3		
56			5,27	8,55	14,8	25,4	43,9	
63			5,83	9,43	16,3	27,7	47,7	
71				10,42	17,9	30,4	52	
80				11,55	19,8	33,5	57	
90						36,8	62,4	
100						40,2	67,8	
112							74,3	

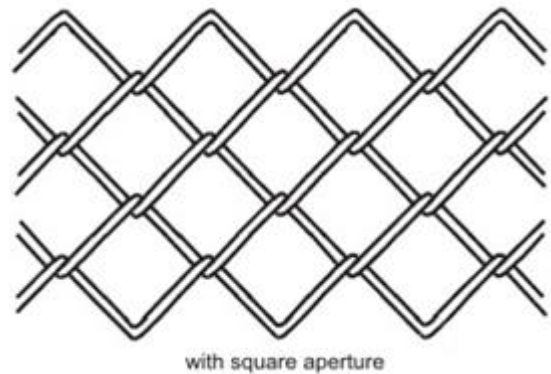
STEEL GRADE: St1kp is according to DSTU 2651:2005; 1006 is according to SOU MPP 77.140-236

PACKAGING: Cardboard boxes of net weight 25 kg.

# STEEL BRAIDED WIRE MESH

(with meshed links)

TU U 27.1-136-003-2003



Gauge and geometrics of the wire mesh:

Wire mesh No.(cell size)	Cell type	Nominal diameter of wire, mm
35	Square	1.8; 2.0; 2.5
40	Square	2.0; 2.4
45	Square	2.0; 2.2; 2.5; 2.7; 3.0
50	Square	1.8; 2.0; 2.2; 2.5; 2.75; 3.0
60	Square	2.5; 2.8; 3.0

Characteristics of weight and quantity of m2 per 1 ton:

Wire mesh type, sizes, mm	Wire mesh weight, kg/m <sup>2</sup>	Quantity m <sup>2</sup> per ton
1.8-35x35	1,174	851,8
1.8-50x50	0,818	1222,5
2.0-35x35	1,458	685,9
2.0-40x40	1,274	784,9
2.0-45x45	1,131	884,2
2.0-50x50	1,016	984,3
2.5-35x35	2,283	438,0
2.5-45x45	1,771	564,7
2.5-50x50	1,591	628,5
2.5-60x60	1,322	756,4
3.0-45x45	2,571	389,0
3.0-50x50	2,310	432,9
3.0-60x60	1,919	521,1

STEEL GRADE: St1, St2 of all degrees of deoxidization are according to DSTU 2770-94;

1006, 1008 are according to SOU MPP 77.140-236

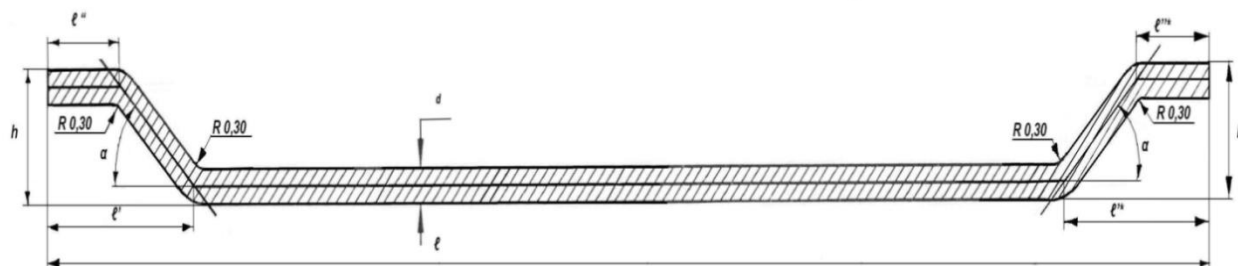
PACKAGING: in rolls of length 10m and width 1.0m; 1.2m; 1.4m; 1.5m; 1.8m; 2.0m

Other roll length and mesh width are possible according to the customer's demand.

# STEEL WIRE FIBER FOR CONCRETE REINFORCEMENT

EN 14889-1:2006; TI 283-MT.PR-71-2016, TI 283-MT.PR-70-2017

Deformed with hooked ends (DZ). Without coating



## Application:

Steel fiber is used as a disperse material for the reinforcing of steel fiber concrete and torkrete concrete.

Quality parameters of steel fiber correspond to the requirements of ASTM A 820 (to a fiber of type I)

Steel fiber is certified by the Institution that fulfills the Certification of the building products «STATYBOS PRODUKCIJOS SERTIFIKAVIMO CENTRAS» regarding the correspondence to EN 14889-1:2006

## Dimensions, shape and tolerances of the steel fiber

$d$ – fiber diameter, mm	$l$ – fiber length, mm	$\lambda$ – value (ratio $l/d$ )	$h$ – hook height, mm	$l', l''^*$ – length of hooked ends, mm	$l'', l''^*$ – anchor length, mm	$\alpha', \alpha''$ – bend angle, °	Quantity in 1kg, pieces
$0,6 \pm 0,03$	$32,0 \pm 1,5$	$53 \pm 4$	$2,4 \pm 0,5$	$5,0 \pm 1,9$	min. 1	$45 \pm 10$	~ 14 075
$0,75 \pm 0,03$	$50,0 \pm 2,0$	$67 \pm 5$	$3,1 \pm 0,3$	$5,0 \pm 1,9$	min. 1	$45 \pm 10$	~ 5 586
$0,75 \pm 0,03$	$52,0 \pm 2,0$	$69 \pm 4$	$3,1 \pm 0,3$	$5,0 \pm 1,9$	min. 1	$45 \pm 10$	~ 5 545
$0,8 \pm 0,04$	$50,0 \pm 2,0$	$63 \pm 4$	$2,9 \pm 0,5$	$5,0 \pm 1,0$	min. 1	$45 \pm 10$	~ 4 894
$0,8 \pm 0,04$	$60,0 \pm 3,0$	$75 \pm 5$	$3,0 \pm 0,5$	$5,0 \pm 1,0$	min. 1	$45 \pm 10$	~ 4105
$0,9 \pm 0,05$	$60,0 \pm 3,0$	$66 \pm 5$	$3,0 \pm 0,5$	$5,0 \pm 1,0$	min. 1	$45 \pm 10$	~ 3225
$1,0 \pm 0,04$	$50,0 \pm 2,0$	$50 \pm 3$	$3,1 \pm 0,5$	$5,0 \pm 1,0$	min. 1	$45 \pm 10$	~ 3 132
$1,0 \pm 0,04$	$60,0 \pm 3,0$	$60 \pm 4$	$3,1 \pm 0,5$	$5,0 \pm 1,0$	min. 1	$45 \pm 10$	~ 2 629

STEEL GRADE: St1, St2 are according to DSTU 2770-94;

1006, 1010, 1012, 1018, 1020 are according to SOU MPP 77.140-236

## Mechanical properties of the steel fiber

Steel fiber size	Rm – average value of the tensile strength of the wire, N/mm <sup>2</sup>	Steel fiber consistence, kg per 1m <sup>3</sup> of concrete, min	E –modulus of elasticity, MPa	Effect on concrete Consistency, seconds acc. to Vebe *	Effect on concrete hardness
60/32	1300	20	200 000	7	The residual flexural strength of the concrete is 1,5 N/mm <sup>2</sup> by CMOD = 0,5 mm (the width of the crack opening) and 1 N/mm <sup>2</sup> by CMOD = 3,5 mm
60/32	1550	15		6	
75/50	1200	25		6	
75/52	1500	20		8	
80/50	1200	25		8	
80/50	1500	20		7	
80/60	1200	25		5	
80/60	1500	20		4	
90/60	1150	25		5	
90/60	1500	20		4	
1/50	1150	30		8	
1/50	1500	20		6	
1/60	1150	20		6	
1/60	1500	25		6	

### PACKAGING:

- Cardboard boxes of net weight 25 kg, packed on the pallet, net weight 1125 kg
- Polypropylene big-bag on the pallet of net weight up to 1000 kg

## THEORETICAL WEIGHT OF STEEL WIRE

Nominal diameter, mm	Theoretical weight of 1 meter of steel wire, g/m	Theoretical length of 1 MT of steel wire (km/MT)	Nominal diameter, mm	Theoretical weight of 1 meter of steel wire, g/m	Theoretical length of 1 MT of steel wire (km/MT)
0,50	1,5	666,66	4,0	98,6	10,142
0,60	2,2	450,772	4,1	103,6	9,654
0,70	3,0	331,180	4,2	108,8	9,199
0,80	3,9	253,559	4,3	113,99	8,777
0,90	4,99	200,343	4,4	119,4	8,382
1,0	6,2	162,278	4,5	124,8	8,014
1,05	6,8	147,191	4,6	130,0	7,692
1,10	7,5	134,114	4,7	136,0	7,353
1,15	8,2	122,706	4,8	142,0	7,043
1,20	8,9	112,693	4,9	148,0	6,756
1,25	9,6	103,858	5,0	154,1	6,491
1,30	10,4	96,022	5,1	160,0	6,250
1,35	11,2	89,041	5,2	167,0	5,988
1,40	12,1	82,795	5,3	173,0	5,780
1,45	12,9	77,183	5,4	180,0	5,555
1,50	13,9	72,123	5,5	185,5	5,365
1,55	14,8	67,545	5,6	193,3	5,175
1,60	15,8	63,391	5,7	200,0	5,000
1,65	16,8	59,605	5,8	207,0	4,831
1,70	17,8	56,151	5,9	215,0	4,651
1,75	18,9	52,989	6,0	221,9	4,508
1,80	19,9	50,085	6,1	229,0	4,344
1,85	21,1	47,414	6,2	237,0	4,219
1,90	22,3	44,953	6,3	245,0	4,081
1,95	23,4	42,676	6,4	253,0	3,953
2,0	24,7	40,570	6,5	260,5	3,841
2,10	27,2	36,798	6,6	269,0	3,717
2,20	29,8	33,528	6,7	277,0	3,610

Nominal diameter, mm	Theoretical weight of 1 meter of steel wire, g/m	Theoretical length of 1 MT of steel wire (km/MT)	Nominal diameter, mm	Theoretical weight of 1 meter of steel wire, g/m	Theoretical length of 1 MT of steel wire (km/MT)
2,30	32,6	30,677	6,8	285,0	3,509
2,40	35,5	28,173	6,9	294,0	3,401
2,45	37,0	27,036	7,0	302,0	3,311
2,50	38,5	25,964	7,1	311,0	3,215
2,60	41,7	24,006	7,2	320,0	3,125
2,65	43,3	23,108	7,3	329,0	3,040
2,70	44,9	22,260	7,4	338,0	2,959
2,75	46,6	21,458	7,5	347,0	2,882
2,80	48,3	20,699	7,6	356,0	2,809
2,90	51,8	19,296	7,7	366,0	2,732
2,95	53,6	18,647	7,8	375,0	2,667
3,0	55,5	18,031	7,9	348,0	2,874
3,10	59,2	16,887	8,0	395,0	2,532
3,20	63,1	15,847	8,1	405,0	2,469
3,30	67,1	14,902	8,2	415,0	2,410
3,40	71,3	14,038	8,3	425,0	2,353
3,45	73,4	13,633	8,4	435,0	2,299
3,50	75,5	13,247	8,5	445,0	2,247
3,60	79,9	12,521	8,6	456,0	2,193
3,70	84,4	11,848	8,7	467,0	2,141
3,75	86,7	11,539	8,8	477,0	2,096
3,80	89,0	11,238	8,9	488,0	2,049
3,90	93,8	10,661	9,0	499,0	2,004
3,95	96,2	10,400	10,0	617,0	1,621