

# STRENGTH CLASS 430 MPA

**BASIC STEEL GRADE** 20 as per GOST 1050

## MECHANICAL PROPERTIES

Steel grade	Standard	Thickness, mm	Ultimate strength, MPa (N/mm <sup>2</sup> )	Yield strength, MPa (N/mm <sup>2</sup> )	Relative elongation, %, min	Mandrel diameter at 180° bending	Impact energy, J, min	
20, 20ps (20nc)	GOST 16523	1.8-2.0	350-500	/	22	0a	/	
	GOST 16523	2.1-3.9	350-500	/	23	1.0a	/	
	GOST 1577	4.0-14.0	≥ 370	/	28	1.0a	/	
	GOST 4041	4.0-12.0	340-490	/	28, 24	a	/	
S275JR, S275JRC	EN 10025:2	1.80-2.00	430-580	≥ 275	15	**	/	
		2.01-2.50			16			
		2.51-2.99			17			
		3.00-9.99	410-560		21			27 (+20)*
		10.00-14.00						
S275J0, S275J0C	EN 10025:2	1.80-2.00	430-580	≥ 275	15	**	/	
		2.01-2.50			16			
		2.51-2.99			17			
		3.00-9.99	410-560		21			27 (0)*
		10.00-14.00						
S275J2, S275J2C	EN 10025:2	1.80-2.00	430-580	≥ 275	15	**	/	
		2.01-2.50			16			
		2.51-2.99			17			
		3.00-9.99	410-560		21			27 (-20)*
		10.00-14.00						
40	ASTM A 1011	1.8-4.45	≥ 380	≥ 275	21	2.0a	/	
	ASTM A 1018	4.50-8.00	≥ 380	≥ 275	19	/	/	
		8.00-14.0			14	/	/	
1020	ASTM A 659	1.80-4.45	/	/	/	2.0a	/	
	ASTM A 635 ASTM A 830	4.50-14.0				/		
SPHT3	JIS G 3132	1.80-2.99	≥ 412	/	22	1.5a	/	
		3.00-5.99			25	2.0a		
		6.00-13.00			27			
-	ASTM A 36	4.5-8.00	400-550	≥ 250	23	/	/	
		8.01-16.00			20			

/ – parameter is not regulated by the standard

a – rolled product thickness

\* impact energy for sample width over 10 mm

\*\* depending on rolled product thickness

Steel with customized mechanical properties is available upon request.

## TOLERANCES FOR DIMENSIONS AND SHAPE OF ROLLED PRODUCTS

Standard for specification	GOST 16523 GOST 14637	EN 10025	ASTM A 659 ASTM A 1011 ASTM A 659	ASTM A 635 ASTM A 1018
Standard for product mix, geometrical dimensions and tolerances	GOST 19903	EN 10051 EN 10029	ASTM A 568	ASTM A 635

## THICKNESS/WIDTH RATIO FOR ROLLED PRODUCTS

Thickness, mm	Strip width, mm														
	900	1,000	1,100	1,200	1,250	1,300	1,350	1,400	1,450	1,500	1,550	1,600	1,650	1,700	1,850
1.45-1.99															
2.00-2.49															
2.50-2.99															
3.00-3.99															
> 4.00															

Rolled products with customized properties, including thickness/width ratio, are available upon request.