

3П53

also listed as 08KH22N6T

Chemical composition, mechanical and physical property values, and 4 standard designations from 1 regions.

OTHER DESIGNATIONS	PROPERTY VALUES
4 in 1 regions	10 on file

Chemical composition

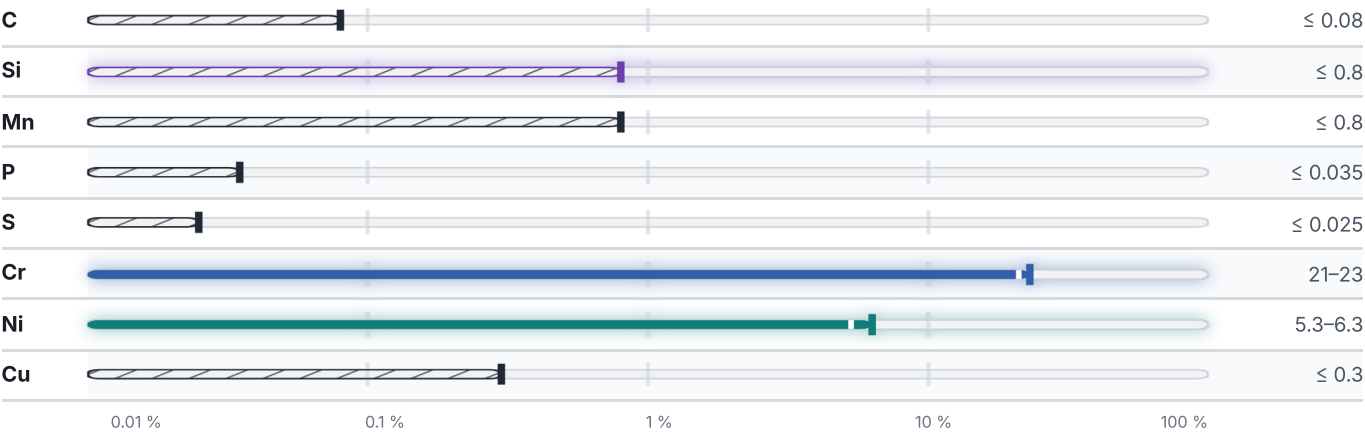
Mass fraction in %

What this alloy is



Iron — the balance, never listed by a standard — 70.2 % Cr — 22 % Ni — 5.8 % Si — 0.8 % Traces & impurities · 1.2 %

Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: Mo.

Mechanical properties

16 values across 3 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²	HB
Pipe hot strain, GOST 9940-81	588	–	24	–	–	–
Pipe cooling strain, GOST 9941-81	588	–	20	–	–	–
Forging, GOST 25054-81	539	343	18–20	35–40	390–780	–
08KH22N6T (08X22H6T) , Forging GOST 25054-81	–	–	–	–	–	140–200
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	KCU kJ/m ²		
Sheet trick, GOST 7350-77	590	345	18	590		
CONDITION · DIMENSION			RM N/mm ²	A5 %		
Sheet thin, GOST 5582-75			640	20		

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ^{^-6} /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.6	203	–	–	740
100	–	201	9.6	14.6	–
200	–	193	13.8	15.9	–
300	–	181	16	18	–
400	–	165	16	19.6	–
500	–	162	16.4	21.3	–
600	–	154	16.2	22.6	–
700	–	141	16.5	23.8	–
800	–	139	16.7	26.3	–
900	–	–	17.1	29.7	–

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	
Temper brittleness	predisposed	

Designations across standards

4 designations · 1 documented as identical

Russia / CIS		4
08KH22N6T	This grade's own name	gost
08X22H6T		gost
0X22H5T		gost
ЭП53		gost

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about ЭП53

Quotation, availability, mill certificate or a technical question — directly on the material page.

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MATERIAL NO.

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ISSUED

Aug 15, 2026