

# NASNM17

## Nonmagnetic Soft Stainless Steel

NASNM17 is a high manganese austenitic stainless steel with a 17Cr-17Mn-7Ni composition. Featuring improved workability, NASNM17 was developed by Nippon Yakin by softening the conventional nonmagnetic austenitic stainless steel. Nippon Yakin supplies this product in plate, sheet and strip forms.

### Steel Grade/Standard

Nippon Yakin Grade	JIS	ASTM
NASNM17	—	—

### Chemical Composition

	C	Si	Mn	P	S	Ni	Cr	N
Specification (NASNM17)	≤0.10	≤1.00	16.00~17.00	≤0.045	≤0.015	7.00~8.00	16.00~18.00	≤0.20

### Physical Properties

Density	[g/cm <sup>3</sup> ]	7.80
Specific heat	[J/kg · K]	500
Electrical resistivity	[μΩ · cm]	75
Thermal conductivity	[W/m · K]	14.5
Average coefficient of thermal expansion [10 <sup>-6</sup> /°C]	30~100°C	16.0
	30~300°C	18.5
	30~500°C	19.5
	30~700°C	20.4
Young's modulus	[MPa]	19.4 × 10 <sup>4</sup>
Magnetism		None
Melting range	[°C]	1340~1400



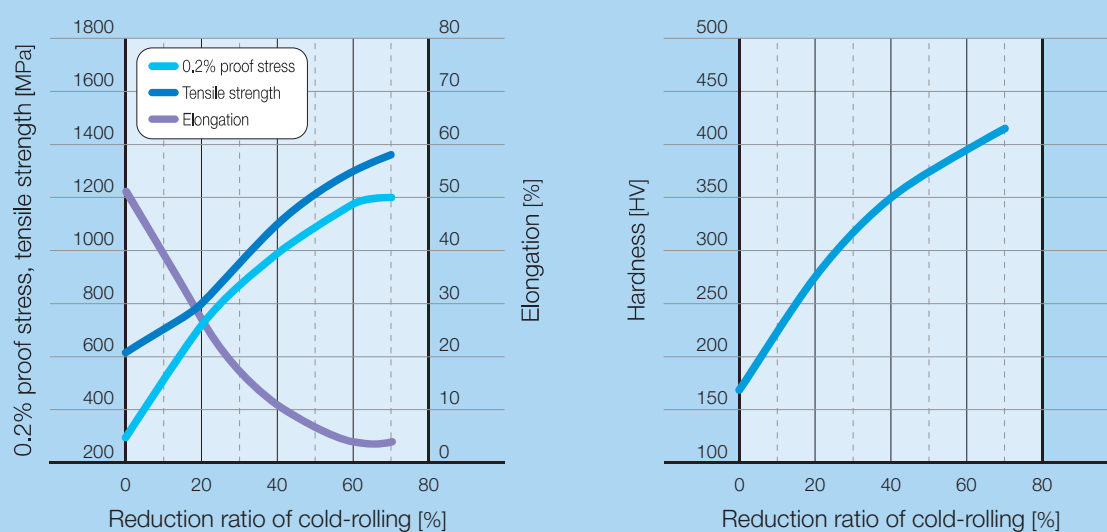
**NIPPON YAKIN KOGYO CO., LTD.**

## Mechanical Properties

### Mechanical Properties at Room Temperature

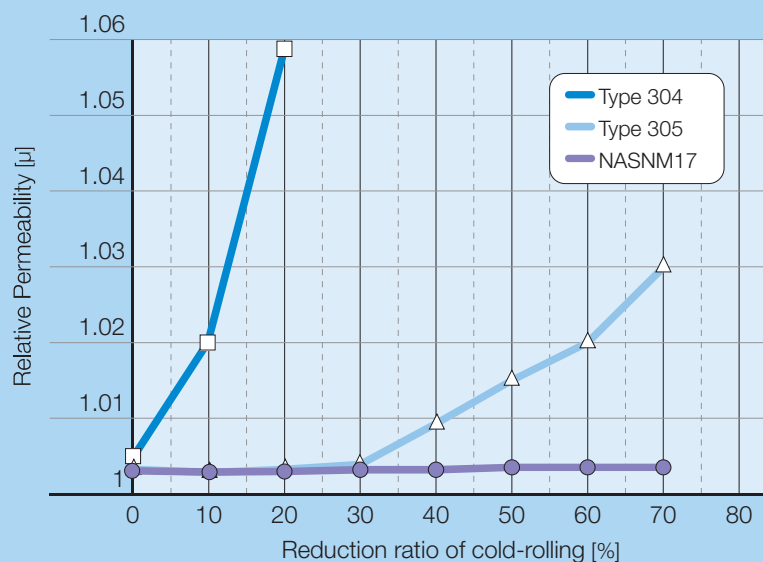
		0.2% proof stress [MPa]	Tensile strength [MPa]	Elongation [%]	Hardness [HV]
Specification (NASNM17)		$\geq 250$	$\geq 550$	$\geq 40$	$\leq 180$
Example	Cold-rolled sheet	313	615	52	160

## Work Hardening



## Permeability

Relative permeability of the product will not change after the cold-working and will not be magnetized as well.



## Corrosion Resistance

NASNM17 provides corrosion resistance equal to standard austenitic stainless steel Type 304. Corrosion resistance is virtually unchanged even after heavy cold working.

## Atmospheric Corrosion Resistance in Salt Spray Test

Test conditions: 5% NaCl, 30°C for 7 days

Solution treatment material	No rust
65% cold-rolled material	No rust

## Formability

Formability is basically equal to that of Type 304.

	Erichsen value (mm)	LDR (Limit Drawing Ratio)
NASNM17	11.5	2.0
NAS304	12.0	2.1

\*Sheet thickness: 0.7mm

## Heat Treatment

Heat treatment of NASNM17 is similar to that of conventional austenitic stainless steels. Typical heat treatment conditions are as follows:

Solution heat treatment: 1030~1150°C; rapid cooling

## Applications

Ornamental metal parts, Electronic components, Components in which a non-magnetic property is required.

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**For more information, please contact:**

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**Note regarding the handling of property data:**

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