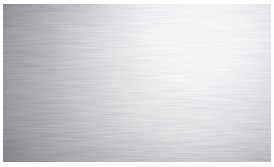
BASE | GÖVDE

Steel | Çelik



BRUSHED STAINLESS STEEL
SATİNE PASLANMAZ ÇELİK

GLOSSY STAINLESS STEEL
PARLAK PASLANMAZ ÇELİK

Steel | Çelik

Property data given in this document is typical for bar products covered by EN 10269:2013. ASTM, EN or other standards may cover products sold. It is reasonable to expect specifications in these standards to be similar but not necessarily identical to those given in this datasheet.

TABLE 1. CHEMICAL COMPOSITION FOR 304 STAINLESS STEEL ALLOYS

%	304	304L	304H
C	0.0 - 0.07	0.0 - 0.03	0.04 - 0.08
Mn	0.0 - 2.0	0.0 - 2.00	0.0 - 2.0
Si	0.0 - 1.00	0.0 - 1.00	0.0 - 1.0
P	0.0 - 0.05	0.0 - 0.05	0.0 - 0.04
S	0.0 - 0.03	0.0 - 0.02	0.0 - 0.02
Cr	17.50 - 19.50	17.50 - 19.50	17.00 - 19.00
Ni	8.00 - 10.50	8.00 - 10.50	8.00 - 11.00
Fe	Balance	Balance	Balance
N	0.0-0.11	0.0-0.11	0.0 - 0.10

MECHANICAL PROPERTIES OF STAINLESS STEEL 304

TABLE 2A. MECHANICAL PROPERTIES FOR 304 STAINLESS STEEL ALLOYS - SHEET UP TO 8 MM THICK

Grade	304	304L	304H
Tensile Strength (MPa)	540 - 750	520 - 700	-
Proof Stress (MPa)	230 Min	220 Min	-
Elongation A50 mm	45 Min %	45 Min %	-

ALLOY DESIGNATIONS

STAINLESS STEEL 304 ALSO CORRESPONDS TO THE FOLLOWING STANDARD DESIGNATIONS AND SPECIFICATIONS:

Euronorm	UNS	BS	En	Grade
1.4301	S30400	304S15 304S16 304S31	58E	304
1.4306	S30403	304S11	-	304L
1.4307	-	304S11	-	304L
1.4311	-	304S11	-	304L
1.4948	S30409	304S51	-	304H

CORROSION RESISTANCE OF STAINLESS STEEL 304

STAINLESS STEEL 304 HAS EXCELLENT CORROSION RESISTANCE IN A WIDE VARIETY

OF ENVIRONMENTS AND WHEN IN CONTACT WITH DIFFERENT CORROSIVE MEDIA. PITTING AND CREVICE
CORROSION CAN OCCUR IN ENVIRONMENTS CONTAINING CHLORIDES. STRESS CORROSION CRACKING CAN OCCUR AT TEMPERATURES OVER 60°C.

HEAT RESISTANCE OF STAINLESS STEEL 304

STAINLESS STEEL 304 HAS GOOD RESISTANCE TO OXIDATION IN INTERMITTENT SERVICE UP TO 870°C AND IN CONTINUOUS SERVICE TO 925°C.

FABRICATION OF STAINLESS STEEL 304

FABRICATION OF ALL STAINLESS STEELS SHOULD BE DONE ONLY WITH TOOLS DEDICATED TO STAINLESS STEEL MATERIALS. TOOLING AND WORK SURFACES MUST BE THOROUGHLY CLEANED BEFORE USE. THESE PRECAUTIONS ARE NECESSARY TO AVOID CROSS CONTAMINATION OF STAINLESS STEEL BY EASILY CORRODED METALS THAT MAY DISCOLOUR THE SURFACE OF THE FABRICATED PRODUCT.

COLD WORKING OF STAINLESS STEEL 304

STAINLESS STEEL 304 READILY WORK HARDENS. FABRICATION METHODS INVOLVING COLD WORKING MAY REQUIRE AN INTERMEDIATE ANNEALING STAGE TO ALLEVIATE WORK HARDENING AND AVOID TEARING OR CRACKING. AT THE COMPLETION OF FABRICATION A FULL ANNEALING OPERATION SHOULD BE EMPLOYED TO REDUCE INTERNAL STRESSES AND OPTIMISE CORROSION RESISTANCE.

HOT WORKING OF STAINLESS STEEL 304

FABRICATION METHODS, LIKE FORGING, THAT INVOLVE HOT WORKING SHOULD OCCUR AFTER UNIFORM HEATING TO 1149-1260°C. THE FABRICATED COMPONENTS SHOULD THEN BE RAPIDLY COOLED TO ENSURE MAXIMUM CORROSION RESISTANCE.

HEAT TREATMENT OF STAINLESS STEEL 304

STAINLESS STEEL 304 CANNOT BE HARDENED BY HEAT TREATMENT
SOLUTION TREATMENT OR ANNEALING CAN BE DONE BY RAPID COOLING AFTER HEATING TO 1010-1120°C.