



Copper Nickel 90/10 Flanges, ASTM B151 UNS C70600 Blind Flange, Slip On Flange, Weld Neck Flange

Basic Information

- Place of Origin: China
- Brand Name: Kasugai
- Certification: ASTM B151, EN10204
- Model Number: C70600
- Minimum Order Quantity: 1 Ton
- Price: To be negotiated
- Packaging Details: Seaworthy packaging
- Delivery Time: 30-50 days
- Payment Terms: T/T, D/P, L/C
- Supply Ability: 500 tons per month



Product Specification

- Size Range (inches): From 1/2" (15 NB) To 48" (1200NB)
- Class: 150 LBS, 300 LBS, 600 LBS, 900 LBS, 1500 LBS, 2500 LBS
- Connection Type: RTJ, Lap-Joint Face, Raised Face, Flat Face, Large Male-Female, Small Male-Female, Large, Tongue & Groove, Small Tongue & Groove



Product Description

Copper Nickel 90/10 Flanges (Cu-Ni 90/10) are highly reliable piping components designed for seawater, marine, and offshore applications where resistance to corrosion, erosion, and biofouling is essential. Manufactured in accordance with **ASTM B151 UNS C70600**, these flanges combine durability with excellent mechanical strength, making them an ideal choice for critical piping systems. Available types include **Blind Flange**, **Slip On Flange**, and **Weld Neck Flange** each engineered to meet international standards and ensure long service life in harsh environments.

Key Features & Benefits

- 1.Superior Corrosion Resistance:** The 90/10 copper-nickel alloy (90% copper, 10% nickel, with small additions of iron and manganese) provides outstanding resistance against seawater corrosion, stress cracking, and pitting.
- 2.High Strength & Toughness:** ASTM B151 UNS C70600 flanges exhibit good mechanical properties at both ambient and elevated temperatures.
- 3.Excellent Fabricability:** Easy to machine, weld, and install in piping systems, reducing overall project costs.
- 4.Versatile Applications:** Widely used in shipbuilding, desalination plants, offshore oil platforms, power generation, and chemical processing industries.
- 5.Standard Compliance:** Produced according to ASTM, ASME, and EEMUA standards, ensuring compatibility and reliability.

Technical Specification

Typical Chemical Composition (ASTM B151 UNS C70600)

Grade	Cu	Pb	Mn	Ni	Zn	Fe
Cu-Ni 90-10	88.6 min	.05 max	1.0 max	9-11 max	1 max	1.8 max

Mechanical Properties

Element	Melting Point	Density	Yield Strength (0.2%Offset)	Tensile Strength	Yield Strength (0.2%Offset)	Elongation
Copper Nickel 90-10	2260 F	0.323 lb/in ³ at 68 F	20000 psi	50000 psi	20000 psi	30 %

Weight Chart

Flange Weights by Pressure Class and Size																		
Pipe Size	150 #			300 #			600 #			900 #			1500 #			2500 #		
	WN	SO	BLD	WN	SO	BLD	WN	SO	BLD	WN	SO	BLD	WN	SO	BLD	WN	SO	BLD
1/2"	2	1	1	2	1	1	2	2	2	SEE 1500 # WEIGHTS			5	4	4	7	7	7
3/4"	2	2	2	3	3	3	4	3	3	SEE 1500 # WEIGHTS			6	5	6	8	8	8
1"	3	2	2	4	3	3	4	4	4	SEE 1500 # WEIGHTS			9	8	8	12	11	11
1 1/2"	4	3	3	7	6	6	8	7	8	SEE 1500 # WEIGHTS			13	12	13	25	22	23
2"	6	5	5	9	7	8	12	9	10	SEE 1500 # WEIGHTS			25	25	25	42	37	39
2 1/2"	8	7	7	12	10	12	18	13	15	SEE 1500 # WEIGHTS			36	36	35	52	55	56
3"	10	8	9	15	13	16	23	16	20	31	26	29	48	48	48	94	83	86
4"	15	13	17	25	22	27	42	37	41	53	53	54	73	73	73	145	125	130
5"	19	15	20	32	28	35	68	63	68	86	83	87	130	130	140	245	210	225
6"	24	19	26	42	39	50	81	80	86	110	110	115	165	165	160	380	325	345
8"	39	30	45	67	58	81	120	115	140	175	170	200	275	260	300	580	485	530

10"	52	43	70	91	81	124	190	170	230	260	245	290	455	435	510	1075	930	1025
12"	80	64	110	140	115	185	225	200	295	325	325	415	690	580	690	1525	1100	1300
14"	110	90	140	180	165	250	280	230	355	400	400	520	940	NA	975	NA	NA	NA
16"	140	98	180	250	190	295	390	330	495	495	425	600	1250	NA	1300	NA	NA	NA
18"	150	130	220	320	250	395	475	400	630	680	600	850	1625	NA	1750	NA	NA	NA
20"	180	165	285	400	315	505	590	510	810	830	730	1075	2050	NA	2225	NA	NA	NA
22"	225	185	355	465	370	640	720	590	1000	1500	1400	2025	3325	NA	3625	NA	NA	NA
24"	260	220	430	580	475	790	830	730	1250	1500	1400	2025	3325	NA	3625	NA	NA	NA

Frequently Asked Questions (FAQ)

Q1: What are the main advantages of Copper Nickel 90/10 flanges?

A1: They provide superior resistance to seawater corrosion, ease of fabrication, and reliable mechanical strength.

Q2: Where are Cu-Ni 90/10 flanges commonly used?

A2: In marine engineering, desalination plants, offshore oil & gas, condensers, heat exchangers, and shipbuilding.

Q3: How do Blind, Slip On, and Weld Neck flanges differ?

A3: Blind flanges close pipeline ends, slip on flanges allow easy alignment and welding, while weld neck flanges handle high-pressure applications with excellent stress distribution.

Q4: Are these flanges certified?

A4: Yes, they are supplied with Mill Test Certificates (EN 10204 3.1/3.2) ensuring compliance with ASTM B151 UNS C70600 and other relevant standards.

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