

INCON, INC.

Z9600
CONTACT – HARDWARE MATERIAL SPECIFICATION

REVISION
J

SCOPE

The purpose of this document is to provide a central listing for material type, specification, and required physical properties for contact and hardware components.

APPLICABILITY

This specification is applicable to all F-series contact and hardware components.

DEFINITIONS

The material will be defined on the component drawing using the following format:

Z9600 – XXX where XXX is the Material code from the table below

MATERIAL CODE	ALLOY / TYPE	APPLICABLE SPECIFICATION	TEMPER	TENSILE STRENGTH
B01	Brass / C36000	ASTM B16	N/A	65 – 80 KSI (448 – 552 N/mm ²) ¹
B02	Brass / C36000	ASTM B16	½ Hard (for reference only)	57 – 67 KSI (393 – 462 N/mm ²) ¹
B03	Brass / C36000	ASTM B16	½ Hard (for reference only)	57 – 78 KSI (393 – 538 N/mm ²) ¹
B04	Brass / C26000	ASTM B134	N/A	102 – 125 KSI (703 – 862 N/mm ²) ¹
C01	Beryllium Copper / C17200	ASTM B194	TD01 ²	75 - 88 KSI (520 – 610 N/mm ²) ¹
C02	Beryllium Copper / C17200	ASTM B194	TD02 ²	85 - 100 KSI (590 – 690 N/mm ²) ¹
C03	Beryllium Copper / C17300	ASTM B196	TD04 ²	90 – 130 KSI (660 – 900 N/mm ²) ¹
C04	Beryllium Copper / C17200	ASTM B196, B197	TD02 ²	85 - 100 KSI (590 – 690 N/mm ²) ¹
C05	Beryllium Copper / C17200 Beryllium Copper / C17300	ASTM B196, B197	TD04 ²	95 – 110 KSI ³ (655 – 758 N/mm ²) ¹
C06	Beryllium Copper / C17200 Beryllium Copper / C17300	ASTM B197	TD02 ² / TD03 ²	110 - 155 KSI (758 – 1069 N/mm ²) ¹
C07	Beryllium Copper / C17200 Beryllium Copper / C17300	ASTM B196 ASTM B197	TD04 ² TD02 ²	90 – 135 KSI (660 – 931 N/mm ²) ¹
P01	Phosphor Bronze / C51000	ASTM B159	H02	80 – 97 KSI (552 – 669 N/mm ²) ¹
S01	S30300	ASTM A582	N/A	N/A
S02	S30500	ASTM A240 or SAE-AMS5514	Soft Annealed or 88 Max Rockwell B or 183 Max HBW	N/A
S03	S30400	ASTM A580	N/A	N/A
S04	S30400	ASTM A240	N/A	N/A

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MATERIAL CODE	ALLOY / TYPE	APPLICABLE SPECIFICATION	TEMPER	TENSILE STRENGTH
S05	S30200	ASTM A240	N/A	N/A
S06	300 Series Stainless Steel / magnetic permeability < or = 2.0 ⁴		N/A	N/A
S07	300 Series Stainless Steel - Low Magnetic Permeability ⁴	ASTM A276 ASTM A484 / A484M ASTM A580 / A580M ASTM A581 / A581M ASTM A582 / A582M	N/A	N/A
S08	S30300	ASTM A581	N/A	N/A
S09	S30300	ASTM A581 / A582	N/A	N/A

- The metric units N/mm² are equivalent to Mpa units. Example: 590 N/mm² = 590 Mpa
- The tempers listed are the “as received” from the Mill tempers, not the final temper of the product as received by Incon. Parts will be heat treated prior to shipment to Incon. See individual drawing for Heat Treating requirements.
- Elongation to be 15% minimum.
- 300 Series (Austenitic) are classified as “Nonmagnetic” or having “Low Magnetic Permeability”
Provided the Certificate of Material Analysis states the material is a 300 series stainless steel alloy, listing of the Magnetic Permeability on the C of A or C of C is not required.

	DESCRIPTION	ECO NO	DRAWN BY	APPROVED BY	DATE
A	INITIAL RELEASE	10079	JPL	GJB	3/18/10
B	REVISED	10134	JPL	GJB	7/6/10
C	REVISED	10274	GJB	JPL	9/1/11
D	REVISED	10601	GJB	JPL	11/7/13
E	REVISED	10693	GJB	JPL	9/15/14
F	REVISED	10747	GJB	JPL	5/27/15
G	REVISED	10854	GJB	JPL	9/28/16
H	REVISED	10905	JPL	JJC	4/25/17
J	REVISED	10982	JJC	JPL	12/11/17