



Certificado de Qualidade

Quality Certificate



749689/2019

Cliente (Customer): AD INSTRUMENTOS CIRURGICOS IMP E EXPORTACAO L^{da} Nota Fiscal (Invoice): 158208
Pedido Cliente (Customer order): VERBAL FERN^{do} Pedido(Order): 733752 Data (Date): 21/11/2019

Material (Product)									
Descricao (Description): Chapa 304 BF Esc PVC branco 0,80 mm x 1240 mm x 3000 mm (BN 19/02066/1)-(Num. Rast. BN 19/02066/1									
Corrida (Heat): 962240H			Placa/O.P.:9002B			Norma (Standard): ASTM A240/A240M		Peso (Weight): 74,00 KG	
Observacao (Observation): DOBRAMENTO 180 TRANS-S									
TRATAMENTO TERMICO: TEMP. MINIMA DE SOLUBILIZAÇÃO 1040°C									
Análise Química (Chemical Composition)					Análise Mecânica (Mechanical Properties)				
C	SI	Mn	Cr	Ni	Mo	N	Ti	P	Limite de Escoamento (Yield Stress): 0,2% 325,00 MPA
0,046	0,410	1,11	17,56	8,01	0,161	452PPA	0,0028	0,0362	Resistencia a Tracao (Strizione): 748,00 MPA Dureza: 84,40 HRB
S	Cu	Al	N2	Nb	Co	Reduc. Area Minima (Reduction of Area): Estricção			
0,0006	0,2616				0,186	Alongamento (Elongation): 56,00% Tam. do Grao (Grain Size): 08/08			



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749427/2019

Cliente (Customer): AD INSTRUMENTOS CIRURGICOS IMP E EXPORTACAO L^{da} Nota Fiscal (Invoice): 370325
Pedido Cliente (Customer order): E-MAIL FERNAL Pedido(Ordem): 733748 Data (Date): 21/11/2019

Material (Product)

Descricao (Description): Barra Redonda 304L - 3,97 mm (5/32") (BR 18/00470/1)-(14 pcs) Num. Rast. BR 18/00470/1
Corrida (Heat): 47964 Placa/O.P.: Norma (Standard): ASTM A/276M-17 Peso (Weight): 8,00 KG
Observacao (Observation): TEMPERATURA MINIMA DE SOLUBILIZACAO 1050°C

Analise Quimica (Chemical Composition)

C	Si	Mn	Cr	Ni	Mo	N	Ti	P
0,022	0,250	1,52	18,1	8,06	0,26			0,034
S	Cu	Al	N2	Nb	Co			
0,026	0,55		0,0760		0,15			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2% 704 MPa
Resistencia a Tracao (Strizione): 800 MPa Dureza: 236 HBW
Reduc. Area Minima (Reduction of Area): 70,00% Estricção
Alongamento (Elongation): 38,00% Tam. do Grao (Grain Size):

Material (Product)

Descricao (Description): Barra Redonda 304L - 4,76 mm (3/16") (BR 19/01502/1)-(34 pcs) Num. Rast. BR 19/01502/1
Corrida (Heat): 52997 Placa/O.P.: Norma (Standard): ASTM A276/M-17 A Peso (Weight): 28,40 KG
Observacao (Observation): DESCASCADO POLIDO / RECOZIDO 1050°C

Analise Quimica (Chemical Composition)

C	Si	Mn	Cr	Ni	Mo	N	Ti	P
0,027	0,360	1,6	18,24	8,04	0,24	0,0770		0,039
S	Cu	Al	N2	Nb	Co			
0,022	0,48				0,17			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2% 707 MPa
Resistencia a Tracao (Strizione): 811 MPa Dureza: 240 HBW
Reduc. Area Minima (Reduction of Area): 68,00% Estricção
Alongamento (Elongation): 39,00% Tam. do Grao (Grain Size):



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736177/2019

Cliente (Customer): AD INSTRUMENTOS CIRURGICOS IMP E EXPORTACAO L^{da} Nota Fiscal (Invoice): 363826
Pedido Cliente (Customer order): EMAIL/FERNAN Pedido(Order): 719508 Data (Date): 04/10/2019

Material (Product)

Descricao (Description): Barra Sextavada 304 - 9,53 mm (3/8") (BR 15/01041/1)-(1 pcs) Num. Rast. BR 15/01041/1
Corrida (Heat): 35358 Placa/O.P.: Norma (Standard): ASTM A 276/13 Peso (Weight): 3,70 KG
Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,019	0,450	0,76	18,06	8,09	0,28			0,035
S	Cu	Al	N2	Nb	CO			
0,026	0,44		0,0740C		0,15			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2% 668 MPA
Resistencia a Tracao (Strizione): 747 MPA Dureza: 222 HB
Reduc. Area Minima (Reduction of Area): 63,0% Estricção
Alongamento (Elongation): 35,0% Tam. do Grao (Grain Size):

Material (Product)

Descricao (Description): Chapa 420 BF 3,00 mm x 1240 mm x 2000 mm (BN 18/00631/2)-(1 pcs) Num. Rast. BN 18/00631/2
Corrida (Heat): 8006951 Placa/O.P.:2001B Norma (Standard): ASTM A480/A480M Peso (Weight): 58,00 KG
Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,308	0,420	0,29	12,28	0,18		108 PPI	0,0041	0,0305
S	Cu	Al	N2	Nb	CO			
0,0015	0,0479				0,017			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2%
Resistencia a Tracao (Strizione): Dureza: 84,60 HRB
Reduc. Area Minima (Reduction of Area): Estricção
Alongamento (Elongation): Tam. do Grao (Grain Size):

Material (Product)

Descricao (Description): Chapa 304 BF 2,50 mm x 1240 mm x 2000 mm (BN 19/02127/1)-(1 pcs) Num. Rast. BN 19/02127/1
Corrida (Heat): 901224F Placa/O.P.:2002B Norma (Standard): ASTM A240/A240M Peso (Weight): 51,00 KG
Observacao (Observation): TEMP MINIMA DE SOLUBILIZAÇÃO 1040 C OXALICO APROVADO

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,059	0,380	1,15	17,75	8	0,046	439 PPI	0,0031	0,0283
S	Cu	Al	N2	Nb	CO			
0,0001	0,1205				0,96			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2% 342,00 MPA
Resistencia a Tracao (Strizione): 729,00 MPA Dureza: 84,73 HRB
Reduc. Area Minima (Reduction of Area): Estricção
Alongamento (Elongation): 55,00 Tam. do Grao (Grain Size): 07/08

Material (Product)

Descricao (Description): Chapa 420 BF 2,50 mm x 1240 mm x 2000 mm (BN 19/01812/1)-(1 pcs) Num. Rast. BN 19/01812/1
Corrida (Heat): 961581F Placa/O.P.:3100B Norma (Standard): ASTM A 176 99 04 Peso (Weight): 49,00 KG
Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,318	0,370	0,29	12,1	0,14	0,01	88 PPM	0,0034	0,0215
S	Cu	Al	N2	Nb	CO			
0,005	0,0249				0,016			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2%
Resistencia a Tracao (Strizione): Dureza: 85,60 HRB
Reduc. Area Minima (Reduction of Area): Estricção
Alongamento (Elongation): Tam. do Grao (Grain Size):



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736177/2019

Cliente (Customer): AD INSTRUMENTOS CIRURGICOS IMP E EXPORTACAO L^{da} Nota Fiscal (Invoice): 363826

Pedido Cliente (Customer order): EMAIL/FERNAN Pedido(Order): 719508

Data (Date): 04/10/2019

Material (Product)

Descricao (Description): Chapa 420 BF 2,00 mm x 1240 mm x 2000 mm (BN 19/02233/1)-(2 pcs) Num. Rast. BN 19/02233/1
Corrida (Heat): 962092C Placa/O.P.:962092C Norma (Standard): ASTM A480/A480M Peso (Weight): 77,00 KG
Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,303	0,360	0,29	12,13	0,19	0,016	174 PPM	0,0037	0,0219
S	Cu	Al	N2	Nb	CO			
0,001	0,0298				0,018			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2%
Resistencia a Tracao (Strizione): Dureza: 86,40 HRB
Reduc. Area Minima (Reduction of Area): Estricção
Alongamento (Elongation): Tam. do Grao (Grain Size):

Material (Product)

Descricao (Description): Chapa 420 BF 1,50 mm x 1240 mm x 2000 mm (BN 19/01914/1)-(1 pcs) Num. Rast. BN 19/01914/1
Corrida (Heat): 970914H Placa/O.P.:2003B Norma (Standard): ASTM A240/A240M Peso (Weight): 29,00 KG
Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,313	0,370	0,32	12,07	0,15	0,012	112 PPM	0,0029	0,0251
S	Cu	Al	N2	Nb	CO			
0,0032	0,0289				0,015			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2%
Resistencia a Tracao (Strizione): Dureza: 85,33 HRB
Reduc. Area Minima (Reduction of Area): Estricção
Alongamento (Elongation): Tam. do Grao (Grain Size):



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ISO 9001:2008

Certificado
desde 1999

716822/2019

Cliente (Customer): AD INSTRUMENTOS CIRURGICOS IMP E EXPORTACAO L^{ta} Nota Fiscal (Invoice): 354575

Pedido Cliente (Customer order): email 29 07 201 Pedido(Order): 707164

Data (Date): 30/07/2019

Material (Product)

Descricao (Description): Chapa 420 BQ 4,00 mm x 1240 mm x 2000 mm (BN 18/00478/1)-(1 pcs)

Num. Rast. BN 18/00478/1

Corrida (Heat): 860044G

Placa/O.P.:9100B

Norma (Standard): ASTM A 176 99 04

Peso (Weight):

78,00 KG

Observacao (Observation):

Analise Quimica (Chemical Composition)

C	SI	Mn	Cr	Ni	Mo	N	Ti	P
0,337	0,360	0,26	12,15	0,19		114 PPI	0,0031	0,0257
S	Cu	Al	N2	Nb	CO			
0,0008	0,0174				0,019			

Analise Mecanica (Mechanical Properties)

Limite de Escoamento (Yield Stress): 0,2%

Resistencia a Tracao (Strizione):

Dureza: 86,00 HRB

Reduc. Area Minima (Reduction of Area):

Estricção

Alongamento (Elongation):

Tam. do Grao (Grain Size):