Produced alloys table (click on the alloy to view the technical sheet)

	Cu	Ni	Sn	Pb	Fe	Al	Si	Mn	As
C46500 - GREEN	59.0 - 62.0		0.50 - 0.10	0 - 0.20	0 - 0.10				0.02 - 0.06
C67300 - C673	58.0 - 63.0	0 - 0.25	0 - 0.3	0.4 - 3	0 - 0.5	0.24 - 0.25	0.5 - 1.5	2 - 3.5	
CF724R - 60Si	58.5 - 61.5		0 - 0.2		0 - 0.25	0 - 0.01	0.2 - 0.4		
CW507L - 65V	63.5 - 65.5	0 - 0.3	0 - 0.1	0 - 0.05	0 - 0.05	0 - 0.02			
CW508L - 63 BABY	62.0 - 64.0	0 - 0.3	0 - 0.1	0 - 0.008	0 - 0.1	0 - 0.05			
CW508L - 63V	62.0 - 64.0	0 - 0.3	0 - 0.1	0 - 0.1	0 - 0.1	0 - 0.05			
CW509L - OT60-LF	57.0 - 61.5	0 - 0.2	0 - 0.2	0 - 0.05	0 - 0.2	0 - 0.05			
CW509L - 60Pb01	59.0 - 61.5	0 - 0.2	0 - 0.2	0 - 0.1	0 - 0.2	0 - 0.05			
CW509L - OT60-USA	59.0 - 61.5	0 - 0.2	0 - 0.2	0 - 0.2	0 - 0.2	0 - 0.05			
CW510L - OT57-USA	57.0 - 59.0	0 - 0.2	0 - 0.3	0 - 0.2	0 - 0.3	0 - 0.05			
CW510L - 57Pb01	57.0 - 59.0	0 - 0.2	0 - 0.3	0 - 0.1	0 - 0.3	0 - 0.05			
CW510L - 58 BABY	57.0 - 59.0	0 - 0.2	0 - 0.3	0 - 0.008	0 - 0.3	0 - 0.05			
CW719R - NAVAL	59.0 - 61.0	0 - 0.2	0.5 - 1	0 - 0.2	0 - 0.1				
CW720R - 58 Mn	57.0 - 59.0	0 - 0.6	0 - 0.3	1.0 - 2.0	0 - 0.3	0 - 0.2	0 - 0.1	1.5 - 3.0	
CW724R - ECOSI	75.0 - 77.0	0 - 0.2	0 - 0.3	0 - 0.10	0 - 0.3	0 - 0.05	2.7 - 3.5	0 - 0.05	
LGCG13 - SPM	59.5 - 61.0	0 - 0.1	0 - 0.3	1.5 - 2.5	0 - 0.3	0 - 0.05			
CW511L - ADZPb01	61.5 - 59.0	0 - 0.10	0 - 0.1	0 - 0.10	0 - 0.1	0 - 0.05		0 - 0.1	0.02 - 0.10
CW511L - ADZ-USA	61.5 - 59.0	0 - 0.3	0 - 0.1	0 - 0.2	0 - 0.1	0 - 0.05		0 - 0.1	0.02 - 0.1
CW600N - 63Pb1	62.5 - 64.0	0 - 0.3	0 - 0.1	0.8 - 1.6	0 - 0.1	0 - 0.05			
CW601N - 63Pb2	62.0 - 63.5	0 - 0.3	0 - 0.1	1.6 - 2.5	0 - 0.1	0 - 0.05			
CW602N - ADZ	61.0 - 63.0	0 - 0.2	0 - 0.1	1.7 - 2.2	0 - 0.1	0 - 0.05		0 - 0.1	0.02 - 0.1
CW603N	60.0 - 62.0	0 - 0.3	0 - 0.2	2.5 - 3.5	0 - 0.3	0 - 0.05			
CW605N	61.0 - 62.5	0 - 0.3	0 - 0.3	0.8 - 1.6	0 - 0.3	0 - 0.05			
CW606N	61.0 - 62.0	0 - 0.3	0 - 0.2	1.6 - 2.5	0 - 0.2	0 - 0.05			
CW607N - 38Pb1.5	60.0 - 61.0	0 - 0.3	0 - 0.2	0.8 - 1.6	0 - 0.2	0 - 0.05			
CW608N - SPM-EN	60.0 - 61.0	0 - 0.3	0 - 0.2	1.6 - 2.5	0 - 0.2	0 - 0.05			
CW610N - IS07	59.0 - 60.5	0 - 0.3	0 - 0.2	0.2 - 0.7	0 - 0.2	0 - 0.05			
CW611N - BTS1.5	59.0 - 60.0	0 - 0.3	0 - 0.3	0.8 - 1.6	0 - 0.3	0 - 0.05			
CW612N - Pb2-C377	59.0 - 60.0	0 - 0.3	0 - 0.3	1.6 - 2.5	0 - 0.3	0 - 0.05			
CW612N - PS22	59.0 - 60.0	0 - 0.1	0 - 0.3	1.6 - 2.2	0 - 0.3	0 - 0.05	0 - 0.03		
CW612N - EL	59.0 - 60.0	0 - 0.3	0 - 0.3	1.6 - 2.5	0 - 0.3	0 - 0.05			
CW613N - PS	59.0 - 60.0	0 - 0.1	0.2 - 0.3	1.6 - 2.2	0 - 0.3	0 - 0.05	0 - 0.03		
CW614N	57.0 - 59.0	0 - 0.3	0 - 0.3	2.2 - 3.5	0 - 0.3	0 - 0.05			
CW616N - 58Al	57.0 - 59.0	0 - 0.2	0 - 0.2	1.0 - 2.0	0 - 0.2	0.05 - 0.3			
CW617N	57.0 - 59.0	0 - 0.3	0 - 0.3	1.6 - 2.2	0 - 0.3	0 - 0.05			
CW625N	62.0 - 64.0	0 - 0.2	0 - 0.3	1.2 - 1.6	0 - 0.1	0.5 - 0.7		0 - 0.1	0.02 - 0.15
CW626N	64.0 - 66.0	0 - 0.2	0 - 0.3	1.2 - 1.7	0 - 0.1	0.8 - 1		0 - 0.1	0.02 - 0.15
CW627N - 58Pb1	57.0 - 59.0	0 - 0.3	0 - 0.3	0.8 - 1.6	0 - 0.3	0 - 0.05			
CW713R - MnAlSi	57.0 - 59.0	0 - 1.0	0 - 0.4	0.2 - 0.8	0 - 1.0	1.3 - 2.3	0.3 - 1.3	1.5 - 3.0	

C67300 - C673

High strength manganese bronze with good hot stamping characteristics and sufficient machinability for chip removal. Ideal for applications requiring a combination of exceptional wear characteristics and high impact resistance.

Chemical composition

Element	%	% standard
Cu	**58.0 63.0**	**58.0 63.0**
Mn	**2 3.5**	**2 3.5**
Pb	**0.4 3**	**0.4 3**
Si	**0.5 1.5**	**0.5 1.5**
Fe	**0.5**	**0.5**
Total others	**0.5**	**0.5**
Sn	**0.3**	**0.3**
Al	**0.24 0.25**	**0.24 0.25**
Ni	**0.25**	**0.25**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**12**
Specific Heat	**377**
Thermal conductivity (W/mK)	**75**
Density (g/cm3)	**8.8**
Elasticity modulus	**96**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**850 - 880**
Annealing T (C°).	**400 -700**

Technological characteristics

Property	
Chip removal	★★★☆☆☆
Cold deformation	★☆☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★☆☆☆
Hot stamping	★★★★★☆

Other regulations

Regulation	Reference
ASTM (CDA):	**C67300**

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CF724R - 60Si

alloy for welding

Chemical composition

Element	%	% standard
Cu	**58.5** **61.5**	**58.5** **61.5**
Si	**0.2** **0.4**	**0.2** **0.4**
Fe	**0.25**	**0.25**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.01**	**0.01**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CF724R**

Physical characteristics

Characteristic	Value
Density (g/cm3)	**8.3**
Structure	**Bifasica + ß**

Technological characteristics

Property	
Chip removal	
Cold deformation	
Dezincification resistant	
Stress corrosion resistance	
Welding	★★★★★★
Hot stamping	

Compatibility

Regulation	
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW507L - 65V

High copper binary alloy for cold deformation compliant with 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List

Chemical composition

Element	%	% standard
Cu	**63.5 65.5**	**63.5 65.5**
Ni	**0.3**	**0.3**
Sn	**0.1**	**0.1**
Total others	**0.1**	**0.1**
Fe	**0.05**	**0.05**
Pb	**0.05**	**0.05**
Al	**0.02**	**0.02**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW507L**
BS:	**CZ108**
ASTM (CDA):	**C27000**
DIN:	**2.0335**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**384**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.47**
Elasticity modulus	**112**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**905 - 930**
Annealing T (C°).	**420 - 700**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★★★
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★★☆☆
Welding	★★★★★★
Hot stamping	★☆☆☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW508L - 63 BABY

Binary alloy for cold deformation compliant with the 4MS Common Composition List and with DM174 of 06/04/04. The alloy has also been included in the new European Positive List. Variant with maximum lead of 80 ppm

Chemical composition

Element	%	% standard
Cu	**62.0** **64.0**	**62.0** **64.0**
Ni	**0.3**	**0.3**
Fe	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Total others	**0.1**	**0.1**
Al	**0.05**	**0.05**
Pb	**0.008**	**0.1**
Cd	**0.0075**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW508L**
BS:	**CZ108**
ASTM (CDA):	**C27400**
DIN:	**2.0321**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**384**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.45**
Elasticity modulus	**112**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**900 - 920**
Annealing T (C°).	**420 - 700**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★★★
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★★☆☆
Welding	★★★★★★
Hot stamping	★☆☆☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW508L - 63V

Standard binary alloy for cold deformation compliant with the 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List

Chemical composition

Element	%	% standard
Cu	**62.0** **64.0**	**62.0** **64.0**
Ni	**0.3**	**0.3**
Fe	**0.1**	**0.1**
Pb	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Total others	**0.1**	**0.1**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW508L**
BS:	**CZ108**
ASTM (CDA):	**C27400**
DIN:	**2.0321**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**384**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.45**
Elasticity modulus	**112**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**900 - 920**
Annealing T (C°).	**420 - 700**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★★★
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★★☆☆
Welding	★★★★★★
Hot stamping	★☆☆☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW509L - OT60-LF

Binary alloy with good cold deformability compliant Binary alloy with good cold deformability compliant with the 4MS Common Composition List and with DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market. Variant with maximum lead equal to 0.05%

Chemical composition

Element	%	% standard
Cu	57.0 61.5	59.0 61.5
Fe	0.2	0.2
Ni	0.2	0.3
Sn	0.2	0.2
Total others	0.2	0.2
Al	0.05	0.05
Pb	0.05	0.2
Others	0.02	
Cd	0.01	0.01

Other regulations

Regulation	Reference
EN:	**CW509L**
BS:	**CZ109**
ASTM (CDA):	**C27450**
DIN:	**2.0360**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**28**
Specific Heat	**375**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.4**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**900 - 905**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★☆☆☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW509L - 60Pb01

Binary alloy with good cold deformability compliant with the 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market. Variant with maximum lead equal to 0.1%

Chemical composition

Element	%	% standard
Cu	**59.0** **61.5**	**59.0** **61.5**
Fe	**0.2**	**0.2**
Ni	**0.2**	**0.3**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Pb	**0.1**	**0.2**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW509L**
BS:	**CZ109**
ASTM (CDA):	**C27450**
DIN:	**2.0360**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**28**
Specific Heat	**375**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.4**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**900 - 905**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★☆☆☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW509L - OT60-USA

Binary alloy with good cold deformability compliant with the 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market

Chemical composition

Element	%	% standard
Cu	**59.0** **61.5**	**59.0** **61.5**
Fe	**0.2**	**0.2**
Ni	**0.2**	**0.3**
Pb	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW509L**
BS:	**CZ109**
ASTM (CDA):	**C27450**
DIN:	**2.0360**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**28**
Specific Heat	**375**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.4**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**900 - 905**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★☆☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW510L - OT57-USA

Binary alloy with excellent hot molding characteristics and sufficient workability for chip removal compliant with the 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market (UND. LAB. CLFD IN ACCORDANCE WITH NSF/ANSI 372 <MH64400>)

Chemical composition

Element	%	% standard
Cu	**57.0 59.0**	**57.0 59.0**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.3**
Pb	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW510L**
ASTM (CDA):	**C28500**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**30**
Specific Heat	**375**
Thermal conductivity (W/mK)	**139**
Density (g/cm3)	**8.39**
Elasticity modulus	**106**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**875 - 890**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★★

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**Yes**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW510L - 57Pb01

Binary alloy with excellent hot pressing characteristics and sufficient machinability for chip removal compliant with the 4MS Common Composition List and with DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market (UND. LAB. CLFD IN ACCORDANCE WITH NSF/ANSI 372 <MH64400>). Variant with maximum lead equal to 0.1%

Chemical composition

Element	%	% standard
Cu	**57.0 59.0**	**57.0 59.0**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.3**
Total others	**0.2**	**0.2**
Pb	**0.1**	**0.2**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW510L**
ASTM (CDA):	**C28500**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**30**
Specific Heat	**375**
Thermal conductivity (W/mK)	**139**
Density (g/cm3)	**8.39**
Elasticity modulus	**106**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**875 - 890**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★★★☆☆☆
Cold deformation	★★☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★★

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**Yes**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW510L - 58 BABY

Binary alloy with excellent hot molding characteristics and sufficient machinability for chip removal compliant with the 4MS Common Composition List and DM174 of 06/04/04. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market (UND. LAB. CLFD IN ACCORDANCE WITH NSF/ANSI 372 <MH64400>). Variant with maximum lead of 80 ppm

Chemical composition

Element	%	% standard
Cu	**57.0 59.0**	**57.0 59.0**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Others	**0.02**	
Pb	**0.008**	**0.2**
Cd	**0.0075**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW510L**
ASTM (CDA):	**C28500**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**30**
Specific Heat	**375**
Thermal conductivity (W/mK)	**139**
Density (g/cm3)	**8.39**
Elasticity modulus	**106**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**875 - 890**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★★

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW511L - ADZPb01

Anti-dezincification binary alloy compliant with the 4MS Common Composition List and with DM174 of 06/04/04 and usable in contact with drinking water for the American market. The alloy was approved by UBA with the new limits of the DWD. Variant with maximum lead equal to 0.10%

Chemical composition

Element	%	% standard
Cu	**61.5** **59.0**	**61.5** **59.0**
Total others	**0.2**	**0.2**
As	**0.02** **0.10**	**0.02** **0.15**
Ni	**0.10**	**0.3**
Pb	**0.10**	**0.2**
Fe	**0.1**	**0.1**
Mn	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW511L**
ASTM (CDA):	**C27453**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**377**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.4**
Elasticity modulus	**108**
Structure	**Monofasica dopo ricottura**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**860 - 910**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★★☆
Dezincification resistant	★★★★★★
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★★☆☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

CW511L - ADZ-USA

Anti-dezincification binary alloy compliant with the 4MS Common Composition List and with DM174 of 06/04/04 and usable in contact with drinking water for the American market

Chemical composition

Element	%	% standard
Cu	**61.5** **59.0**	**61.5** **59.0**
Ni	**0.3**	**0.3**
Pb	**0.2**	**0.2**
Total others	**0.2**	**0.2**
As	**0.02** **0.1**	**0.02** **0.15**
Fe	**0.1**	**0.1**
Mn	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Al	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**377**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.4**
Elasticity modulus	**108**
Structure	**Monofasica dopo ricottura**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**860 - 910**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★★☆
Dezincification resistant	★★★★★★
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★★☆☆

Other regulations

Regulation	Reference
EN:	**CW511L**
ASTM (CDA):	**C27453**

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW600N - 63Pb1

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**62.5 64.0**	**62.5 64.0**
Pb	**0.8 1.6**	**0.8 1.6**
Ni	**0.3**	**0.3**
Fe	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Total others	**0.1**	**0.1**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW600N**
BS:	**CZ118**
ASTM (CDA):	**C34000**
DIN:	**2.0331**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**380**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.5**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 915**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★★☆☆
Welding	★★★★★★
Hot stamping	★★☆☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW601N - 63Pb2

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**62.0 63.5**	**62.0 63.5**
Pb	**1.6 2.5**	**1.6 2.5**
Ni	**0.3**	**0.3**
Fe	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Total others	**0.1**	**0.1**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW601N**
BS:	**CZ131**
ASTM (CDA):	**C34200**
DIN:	**2.0331**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**24**
Specific Heat	**380**
Thermal conductivity (W/mK)	**116**
Density (g/cm3)	**8.46**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 915**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★★☆☆
Welding	★★★★★★
Hot stamping	★★☆☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW602N - ADZ

Standard anti-dezincification lead alloy

Chemical composition

Element	%	% standard
Cu	**61.0** **63.0**	**61.0** **63.0**
Pb	**1.7** 2.2	**1.7** **2.8**
Ni	0.2	**0.3**
Total others	**0.2**	**0.2**
As	**0.02** 0.1	**0.02** **0.15**
Fe	**0.1**	**0.1**
Mn	**0.1**	**0.1**
Sn	**0.1**	**0.1**
Al	**0.05**	**0.05**
Others	0.02	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW602N**
BS:	**CZ132**
ASTM (CDA):	**C35330**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**377**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.46**
Elasticity modulus	**100**
Structure	**Monofasica dopo ricottura**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**875 - 890**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★★★★★★
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★★☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW603N

Alloy with excellent machinability for chip removal with good cold workability

Chemical composition

Element	%	% standard
Cu	**60.0** **62.0**	**60.0** **62.0**
Pb	**2.5** **3.5**	**2.5** **3.5**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW603N**
BS:	**CZ124**
ASTM (CDA):	**C36000**
DIN:	**2.0375**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**380**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.50**
Elasticity modulus	**97**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★★
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW605N

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**61.0** **62.5**	**61.0** **62.5**
Pb	**0.8** **1.6**	**0.8** **1.6**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW605N**
ASTM (CDA):	**C37000**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**25**
Specific Heat	**377**
Thermal conductivity (W/mK)	**116**
Density (g/cm3)	**8.46**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW606N

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**61.0** **62.0**	**61.0** **62.0**
Pb	**1.6** **2.5**	**1.6** **2.5**
Ni	**0.3**	**0.3**
Fe	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW606N**
BS:	**CZ131**
ASTM (CDA):	**C35300**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**26**
Specific Heat	**377**
Thermal conductivity (W/mK)	**115**
Density (g/cm3)	**8.5**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 915**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW607N - 38Pb1.5

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**60.0 61.0**	**60.0 61.0**
Pb	**0.8 1.6**	**0.8 1.6**
Ni	**0.3**	**0.3**
Fe	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW607N**
BS:	**CZ129**
ASTM (CDA):	**C37000**
DIN:	**2.0371**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**24**
Specific Heat	**376**
Thermal conductivity (W/mK)	**110**
Density (g/cm3)	**8.4**
Elasticity modulus	**103**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 915**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW608N - SPM-EN

Alloy for mechanical process with good cold deformation

Chemical composition

Element	%	% standard
Cu	**60.0 61.0**	**60.0 61.0**
Pb	**1.6 2.5**	**1.6 2.5**
Ni	**0.3**	**0.3**
Fe	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW608N**
BS:	**CZ128**
ASTM (CDA):	**C37700**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.5**
Elasticity modulus	**100**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW610N - IS07

Alloy for mechanical process with discrete cold deformation.Maximum lead equal to 0.7%

Chemical composition

Element	%	% standard
Cu	**59.0** **60.5**	**59.0** **60.5**
Pb	**0.2** **0.7**	**0.2** **0.8**
Ni	**0.3**	**0.3**
Fe	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW610N**
BS:	**CZ137**
ASTM (CDA):	**C36500**
DIN:	**2.0372**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**28**
Specific Heat	**380**
Thermal conductivity (W/mK)	**123**
Density (g/cm3)	**8.4**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW713R - MnAlSi

High strength complex alloy with good hot stamping characteristics and sufficient machinability for chip removal with excellent mechanical properties and wear resistance.

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Mn	**1.5** **3.0**	**1.5** **3.0**
Al	**1.3** **2.3**	**1.3** **2.3**
Si	**0.3** **1.3**	**0.3** **1.3**
Fe	**1.0**	**1.0**
Ni	**1.0**	**1.0**
Pb	**0.2** **0.8**	**0.2** **0.8**
Sn	**0.4**	**0.4**
Total others	**0.3**	**0.3**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**13**
Specific Heat	**377**
Thermal conductivity (W/mK)	**81**
Density (g/cm3)	**8.1**
Elasticity modulus	**93**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**350 - 450**
Melting T (C°).	**875 - 910**
Annealing T (C°).	**500 - 700**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★☆☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★☆☆☆
Hot stamping	★★★★★☆

Other regulations

Regulation	Reference
EN:	**CW713R**
BS:	**CZ135**
DIN:	**2.0550**

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW719R - NAVAL

Low lead content tin alloy (Naval Brass) with excellent resistance to marine corrosion

Chemical composition

Element	%	% standard
Cu	**59.0** **61.0**	**59.0** **61.0**
Sn	**0.5** **1**	**0.5** **1**
Ni	**0.2**	**0.2**
Pb	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Fe	**0.1**	**0.1**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW719R**
BS:	**CZ133**
ASTM (CDA):	**C46400**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**18**
Specific Heat	**380**
Thermal conductivity (W/mK)	**50**
Density (g/cm3)	**8.3**
Elasticity modulus	**93**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**425 - 600**

Technological characteristics

Property	
Chip removal	★★☆☆☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★☆
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW720R - 58 Mn

Manganese alloy resistant to corrosion and high temperatures, with discrete machinability and good stamping characteristics

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Mn	**1.5** **3.0**	**1.5** **3.0**
Pb	**1.0** **2.0**	**1.0** **2.0**
Ni	**0.6**	**0.6**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.3**	**0.3**
Al	**0.2**	**0.2**
Si	**0.1**	**0.1**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW720R**
BS:	**CZ136**
DIN:	**2.0580**

Physical characteristics

Characteristic	Value
Specific Heat	**380**
Thermal conductivity (W/mK)	**113**
Density (g/cm3)	**8.4**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★☆☆☆
Cold deformation	★★☆☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★☆☆☆☆☆
Welding	★★★☆☆☆
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW724R - ECOSI

Low lead copper/silicon alloy, anti-dezincification and with good resistance to stress corrosion cracking with excellent hot stamping characteristics and sufficient machinability for chip removal compliant with the 4MS Common Composition List. The alloy has also been included in the new European Positive List and can be used in contact with drinking water for the American market

Chemical composition

Element	%	% standard
Cu	**75.0** **77.0**	**75.0** **77.0**
Si	**2.7** **3.5**	**2.7** **3.5**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.2**
Total others	**0.2**	**0.2**
P	**0.02** **0.10**	**0.02** **0.10**
Pb	**0.10**	**0.10**
Al	**0.05**	**0.05**
Mn	**0.05**	**0.05**
Others	**0.02**	
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW724R**
ASTM (CDA):	**C69300**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**8**
Specific Heat	**350**
Thermal conductivity (W/mK)	**40**
Density (g/cm3)	**8.3**
Elasticity modulus	**100**
Structure	**Multifasica**
Thermal Stress relieving T (C°)	**300 - 400**
Melting T (C°).	**885 - 950**
Annealing T (C°).	**500 - 700**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★☆☆☆☆☆
Dezincification resistant	★★★★★★
Stress corrosion resistance	★★★★★★
Welding	★★★★★☆
Hot stamping	★★★★★★

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**No**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**Yes**

LGCG13 - SPM

Non-standardized alloy for machining with good cold machinabilitysimilar to the CW608N alloy

Chemical composition

Element	%	% standard
Cu	**59.5 61.0**	**59.5 61.0**
Pb	**1.5 2.5**	**1.5 2.5**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Ni	**0.1**	**0.1**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.5**
Elasticity modulus	**100**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★★
Hot stamping	★★★☆☆☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

LGCG13 - SPM	Non-standardized alloy for machining with good cold machinabilitysimilar to the CW608N alloy

CW611N - BTS1.5	Alloy for mechanical process with discrete cold deformation.Maximum lead equal to 1.5%

Chemical composition

Element	%	% standard
Cu	**59.0 60.0**	**59.0 60.0**
Pb	**0.8 1.6**	**0.8 1.6**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**400 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆

CW611N - BTS1.5	Alloy for mechanical process with discrete cold deformation.Maximum lead equal to 1.5%

Other regulations	
Regulation	Reference
EN:	**CW611N**
BS:	**CZ129**
ASTM (CDA):	**C37000**

Property	
Welding	★★★★★☆
Hot stamping	★★★★★☆

Compatibility	
Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW612N - Pb2-C377	Alloy for machining with discrete cold machinability and good stamping characteristics compliant with the American alloy C37700

CW612N - Pb2-C377

Alloy for machining with discrete cold machinability and good stamping characteristics compliant with the American alloy C37700

Chemical composition

Element	%	% standard
Cu	**59.0** **60.0**	**59.0** **60.0**
Pb	**1.6** **2.5**	**1.6** **2.5**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW612N**
BS:	**CZ120**
ASTM (CDA):	**C37700**
DIN:	**2.0380**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 895**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW612N - PS22

Alloy for machining with discrete cold machinability and good stamping characteristics compliant with the 4MS Common Composition List and DM174 of 06/04/04

Chemical composition

Element	%	% standard
Cu	**59.0** **60.0**	**59.0** **60.0**
Pb	**1.6** **2.2**	**1.6** **2.5**
Fe	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Ni	**0.1**	**0.3**
Al	**0.05**	**0.05**
Si	**0.03**	
Others	**0.02**	
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 895**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Other regulations

Regulation	Reference
EN:	**CW612N**
BS:	**CZ120**
ASTM (CDA):	**C37700**
DIN:	**2.0380**

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW612N - EL

Alloy for mechanical process with discrete cold deformation

Chemical composition

Element	%	% standard
Cu	**59.0** **60.0**	**59.0** **60.0**
Pb	**1.6** **2.5**	**1.6** **2.5**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW612N**
BS:	**CZ120**
ASTM (CDA):	**C37700**
DIN:	**2.0380**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 895**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW613N - PS

Alloy for machining with discrete cold machinability and good stamping characteristics compliant with the 4MS Common Composition List and DM174 of 06/04/04

Chemical composition

Element	%	% standard
Cu	**59.0** **60.0**	**59.0** **60.0**
Pb	**1.6** **2.2**	**1.6** **2.5**
Fe	**0.3**	**0.4**
Sn	**0.2** **0.3**	**0.2** **0.5**
Total others	**0.2**	**0.2**
Ni	**0.1**	**0.3**
Al	**0.05**	**0.05**
Si	**0.03**	
Others	**0.02**	
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 895**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Other regulations

Regulation	Reference
EN:	**CW613N**

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW614N

Standard lead alloy for mechanical processing

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Pb	**2.2** **3.5**	**2.2** **3.5**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW614N**
BS:	**CZ121**
ASTM (CDA):	**C38500**
DIN:	**2.0401**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**28**
Specific Heat	**380**
Thermal conductivity (W/mK)	**123**
Density (g/cm3)	**8.47**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 900**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★★★★★★
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW616N - 58Al

Lead alloy for hot stamping with excellent surface qualities and good machinability

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Pb	**1.0** **2.0**	**1.0** **2.0**
Al	**0.05** **0.3**	**0.05** **0.3**
Fe	**0.2**	**0.2**
Ni	**0.2**	**0.2**
Sn	**0.2**	**0.2**
Total others	**0.2**	**0.2**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW616N**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**113**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★☆
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW617N

Standard lead alloy for hot stamping with good machinability

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Pb	**1.6** **2.2**	**1.6** **2.2**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Other regulations

Regulation	Reference
EN:	**CW617N**
BS:	**CZ122**
ASTM (CDA):	**C37700**
DIN:	**2.0402**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 900**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★★★★★☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★☆

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW625N

Anti-dezincification lead alloy compliant with the 4MS Common Composition List and with DM174 of 06/04/04

Chemical composition

Element	%	% standard
Cu	**62.0 64.0**	**62.0 64.0**
Pb	**1.2 1.6**	**1.2 1.6**
Al	**0.5 0.7**	**0.5 0.7**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.2**
Total others	**0.2**	**0.2**
As	**0.02 0.15**	**0.02 0.15**
Fe	**0.1**	**0.1**
Mn	**0.1**	**0.1**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**23**
Specific Heat	**380**
Thermal conductivity (W/mK)	**93**
Density (g/cm3)	**8.5**
Elasticity modulus	**100**
Structure	**Monofasica dopo ricottura**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**860 - 910**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★★★★★☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★☆
Hot stamping	★★★★☆☆

Other regulations

Regulation	Reference
EN:	**CW625N**

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW626N

Anti-dezincification lead alloy compliant with the 4MS Common Composition List and with DM174 of 06/04/04

Chemical composition

Element	%	% standard
Cu	**64.0** **66.0**	**64.0** **66.0**
Pb	**1.2** **1.7**	**1.2** **1.7**
Al	**0.8** **1**	**0.8** **1**
Sn	**0.3**	**0.3**
Ni	**0.2**	**0.2**
Total others	**0.2**	**0.2**
As	**0.02** **0.15**	**0.02** **0.15**
Fe	**0.1**	**0.1**
Mn	**0.1**	**0.1**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**24**
Specific Heat	**380**
Thermal conductivity (W/mK)	**96**
Density (g/cm3)	**8.5**
Elasticity modulus	**96**
Structure	**Monofasica dopo ricottura**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**860 - 910**
Annealing T (C°).	**400 - 650**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★★★★★☆
Stress corrosion resistance	★★★☆☆☆
Welding	★★★★★☆
Hot stamping	★★★★☆☆

Other regulations

Regulation	Reference
EN:	**CW626N**

Compatibility

Regulation	
4MS UBA LIST	**Yes**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW627N - 58Pb1

Low lead alloy for hot stamping with good machinability

Chemical composition

Element	%	% standard
Cu	**57.0** **59.0**	**57.0** **59.0**
Pb	**0.8** **1.6**	**0.8** **1.6**
Fe	**0.3**	**0.3**
Ni	**0.3**	**0.3**
Sn	**0.3**	**0.3**
Total others	**0.2**	**0.2**
Al	**0.05**	**0.05**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**27**
Specific Heat	**380**
Thermal conductivity (W/mK)	**120**
Density (g/cm3)	**8.40**
Elasticity modulus	**105**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**885 - 900**
Annealing T (C°).	**350 - 600**

Technological characteristics

Property	
Chip removal	★★★★☆☆
Cold deformation	★★★☆☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★☆☆☆☆
Welding	★★★★★★
Hot stamping	★★★★★★

Compatibility

Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**No**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**

CW627N - 58Pb1	Low lead alloy for hot stamping with good machinability

C46500 - GREEN	Naval Brass Arsenical Low Lead

Chemical composition

Element	%	% standard
Cu	**59.0 62.0**	**59.0 62.0**
Total others	**0.4**	**0.4**
Pb	**0.20**	**0.20**
Fe	**0.10**	**0.10**
Sn	**0.50 0.10**	**0.50 0.10**
As	**0.02 0.06**	**0.02 0.06**
Cd	**0.01**	**0.01**

Physical characteristics

Characteristic	Value
Electrical conductivity (IACS %)	**18**
Specific Heat	**380**
Thermal conductivity (W/mK)	**50**
Density (g/cm3)	**8.41**
Elasticity modulus	**93**
Structure	**Bifasica + ß**
Thermal Stress relieving T (C°)	**250 - 350**
Melting T (C°).	**880 - 900**
Annealing T (C°).	**425 - 600**

Technological characteristics

Property	
Chip removal	★☆☆☆☆☆
Cold deformation	★★★★☆☆
Dezincification resistant	★☆☆☆☆☆
Stress corrosion resistance	★★★☆☆☆

C46500 - GREEN

Naval Brass Arsenical Low Lead

Property	
Welding	★★★★★☆
Hot stamping	★★★★★☆

Other regulations	
Regulation	Reference
ASTM (CDA):	**C46500**

Compatibility	
Regulation	
4MS UBA LIST	**No**
DM 174:2004	**Yes**
AB 1953 California	**Yes**
NSF372	**No**
2000/53/CE ELV	**Yes**
2011/65/CE ROHS	**Yes**
1907/2006/CE REACH	**No**