

ACCRÉDITED

ISO 9001 Certified Quality System ITAR/DDTC Registered Cage Code: 3G1X9 NAICS: 332813

Alexandria Metal Finishers



Over 60 Years of Quality Metal Finishing 1962 - 2024

and post-bake

class per ASTM-B-850

*Types IV, V and VI not available at Alexandria Metal Finishers.

reauirements

Type II

Type III

96 hours 12 hours

| PROCESS | | / / / | | | | |
 | | |

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 | / / | / / | | / / | / / / |
 | /// | / / /
 | | / / | | | | |
|---|--|--|---|---|---|--
---|--|--
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---	--	--	--
---	---	--	---
---	---	--	---
	SPEC	THICKNESS	COMMENTS
 | THUR | -RI SAT | FEBI
SUN

 | RUARY
MON
 | | | R FRI | SAT | MARC
SUN |
 | |
 | R FRI | SAT | PROCESS | SPEC | THICKNESS | COMMENTS |
| ANODIZE
SULFURIC | MIL-PRF-8625
MIL-A-8625 | | | | 1 | 2 | 3
 | 4 | 5 6 |

 |
 | | 1 | 2 | 3 | |
 | |
 | 1 | 2 | PASSIVATE
Alternate spec to supersede | ASTM-A-967 | | Nitric AcidSodium |
| Color will vary with alloy.
Aluminum with low alloying | | 0.000070" -
0.0010" | All aluminum alloys, but do not
use where solution will entrap. | 7 | 8 | 9 | 10
 | | 12 13 | 4

 | 5
 | 6 7 | ' 8 | 9 | 10 | 3 |
 | 56 | 3 7
 | 8 | 9 | QQ-P-35. In addition to passivate
using Nitric acid (and Sodium
Dichromate), this ASTM also
introduces passivation using | Nitric 1 | 120°-130°F | (Vol. %) Dichromate
(Weight %)
20 - 25 2.5 ± 0.5 |
| elements will show practically
no color change. Best coating
on aluminum for dyeing. Can | Type II | 0.0010 | | 14 | 15 | 16 | 17
 | | 19 20 | 11

 | 12
 | 13 1 | | | 17 | 10 |
 | 12 1 |
 | | 16 | Citric acid which at the present
time, Alexandria Metal Finishers
does not perform. | Nitric 2 | 20 min.
70°-90°F | 20 - 45 none |
| be dyed practically any color
or shade
(Black, blue, red, gold, orange,
green, etc.). | Type IIB | Light Coating | | 21 | 22
29 | 23
30 | 24
31
 | 25 | 26 27 | 18
25

 | 19
26
 | 20 2
27 2 | 1 22
8 29 | | 24 | 17 |
 | 19 20
26 2 [°] |
 | | 23
30 | | Nitric 3 | 30 min.
120°-140°F | 20 - 25 none | |
| Salt spray requirement is 336
hours (5% NaCl solution) per | Class 1 | | Non-dyed | | | |
 | | |

 |
 | | | ,
 | | 31 |
 | | / 20
 | | | | Nitric 4 | 20 min.
120°-130°F | 45 - 55 none | |
| method B-117 of ASTM.
Minimum weight for type II
coatings: | Class 2 | | Dyed
For Class 1, Alexandria's
standard practice for sealing is | | | |
 | | |

 |
 | / / | | / / | /// | | ///
 | /// | ///
 | | | | | 30 min. | |
| Class 1 1,000 Milligrams/sq.ft. | | | "Clear, hot DI water".
Dichromate seal may be
specified (resulting color will be | APRIL
SUN | L
MON | TUE | WED
 | THUR | -RI SAT | MAY
SUN

 |
 | TUE W | D THU | R FRI | SAT | JUNE SUN | MON
 | TUE WE | ED THU
 | R FRI | SAT | | Nitric 5 | As required | As required to pass test |
| | | | pale yellow-green).
FED-STD-No. 595 may be used
as a guide for specifying color | | 1 | 2 | 3
 | 4 | 56 |

 |
 | | 2 | | 4 | |
 | |
 | | 1 | RHODIUM | MIL-R-46085 | | |
| | | | (approximate comparison only). | 7 | 8 | 9
16 | 10
17
 | 11 ·
18 · | 12 13
19 20 | 5

 | 6
13
 | 7 8
14 1 | 9
5 16 | 10 | 11 | 2 | 3
 | 4 5 | 5 6
0 40
 | 7 | 8 | Metallic and similar to stainless steel in color. Excellent | Type I | | Over Nickel, Silver, Gold, or
Platinum |
| AEROSPACE MATERIAL
SPECIFICATIONS (AMS) | | | | 14
21 | 22 | 23 | 24
 | _ | 26 27 | 12

 | 20
 | 21 2 | | | 18
25 | 9 | 10
 | 11 1:
18 1: | 2 13
9 20
 | | 15
22 | corrosion resistance. Almost as
hard as chromium. Very good
abrasion resistance. Good
solderability. Low contact | Type II | | Over other metals
(require Nickel Undercoat) |
| AMS anodizing specifications are
similar to Mil-A-8625. The major
differences are in the testing | AMS-2469 | Hardcoat
0.002" ±
0.0005" | Salt Spray test is requirement
(when sealed) for 336 hours | 28 | 29 | 30 |
 | | | 26

 | 27
 | | 9 30 | | | 23 | 24
 | 25 2 |
 | | 29 | resistance. Thicker coatings are
very brittle. Has high reflectivity.
Inactive for new design.
Provided for reference. | Class 1 | 0.000002" min. | Used on Silver for tarnish
resistance. applications range |
| requirements. All AMS specs do
not allow production parts to be
run until preproduction samples
have been approved or waived in | AMS-2471 | Sulfuric Acid | 336 hours salt spray test | | | |
 | | | /

 |
 | | | | | 30 |
 | |
 | | | | Class 2 | 0.00001" min. | from electronic to nose cones
wherever wear, corrosion
resistance, solderability, and
reflectivility are important |
| writing by purchaser. Coating
weight test may be required on a
lot basis rather than a monthly | | Process - no
dye coating | required and controlled on 6061
- T3 aluminum. (Dichromate Sealed) | JULY | | |
 | / / | | AUG

 |
 | /////// | | /// | | SEPTE | MBED
 | I | I
 | | | | Class 3 | 0.00002" min. | |
| basis. Additional and/or specific
tests maybe required.
*** The AMS 2469-2482 | AMS-2472 | Sulfuric Acid
dye Black | 336 hours salt spray test
required and controlled on 6061 | SUN | MON | TUE |
 | THUR | -RI SAT | SUN

 |
 | TUE W | D THU | R FRI | SAT | SUN | MON
 | TUE WE | ED THU
 | R FRI | SAT | | Class 4 | 0.00010" min. | |
| in this block are the only
finishes not included in our
Nadcap scope. All other finishes | | · | - TŻ aluminum. | 7 | 1 | 2 | 3
 | 4 | 5 6 |

 |
 | | 1 | 2 | 3 | 1 |
 | 3 4 | 1 5
 | 6 | 7 | | Class 5 | 0.00025" min. | |
| and specifications shown are included. | AMS-2482 | Hardcoat
0.002" ±
0.0005" | 336 hours salt spray test
required. Coefficient of friction
test required. | 14 | 15 | 9
16 | 10
17
 | | 12 13
19 20 | 4

 | 5
12
 | 13 1 | ' 8
4 15 | 9
5 16 | 10 | 15 |
 | 10 1 [·]
17 18 |
 | | 14
21 | SILVER
White matte to very bright in | QQ-S-365 | 0.0005" min. | Increasing use in both decorative |
| CHEMICAL | | with Teflon | | 21 | 22 | 23 | 24
 | | 26 27 | 18

 | 19
 | 20 2 | | | 24 | 22 |
 | 24 2 |
 | | 28 | appearance. Good corrosion
resistance, depending on base
metal. Will tarnish easily.
Hardness varies from about 90 | | unless otherwise
specified for
most metals. | and engineering fields, including
electrical and electronics fields. |
| FILM | MIL-DTL-5541 | | | 28 | 29 | 30 | 31
 | | | 25

 | 26
 | 27 2 | 8 29 | 30 | 31 | 29 | 30
 | |
 | | | Brinnell to about 135 Brinnell
depending on process and
plating conditions. Solderability | Type I | For Fe Alloys,
unless otherwise
specified, it shall
be 0.0005" min. | Matte
Sami Bright | |
| Coatings for aluminum. Color
can vary from colorless to
golden - iridescent -brown. | Class 1 A | No
Dimensional | Class 1A is used as a corrosion
preventative film (if unpainted) or | | | |
 | | |

 |
 | | | | | |
 | |
 | | | is excellent, but decreases with
age. Best electrical conductor.
Has excellent lubricity and smear
characteristics for anti galling | Type II
Type III | of silver with a
total plating
thickness of | Semi-Bright
Bright |
| Materials should conform to
MIL-DTL-81706. Coatings shall
be continuous, free from | Class 3 | Change | to improve adhesion of paint
finish systems (if painted). | ОСТО | | // | //
 | //// | //// |

 |
 | I | | | | DECEN | VBFP
 | |
 | | | uses on static seals, bushings,
etc. This specification is provided
for reference purposes only as it
has been canceled. Users may | Grade A | 0.001" min.
(the balance to
be
Cu + Ni, but | Chromate post treatment to
improve tarnish resistance* * |
| powdery areas, breaks,
scratches, etc. | ບເສຣຣ ປ
 | | Class 3 is used as a corrosion
preventative film for electrical
and electronic applications,
where low resistance contacts | SUN | MON | TUE |
 | | RI SAT | SUN

 |
 | TUE W | D THU | R FRI | SAT | SUN |
 | |
 | | SAT | consult ASTM-B-700
(see below). | Grade B | should not
exceed
0.0005") | No Chromate treatment |
| Type I Yellow or Clear Chromate.
Type II Clear (RoHS compliant
Hex-free, Cl. 1A or 3) | | | where low resistance contacts
are required. Low electrical
resistance test not required
unless specified. | E | | 1
8 | 2
9
 | 3
10 | 4 5
11 12 | 3

 | 4
 | 5 6 | , | 1 | 2 | 1
 | 2
 | 3 4 | 1 5
1 12
 | | 7 | | | | * * (Lot test required) |
| / | | | | 13 | 14 | 8
15 | 9
16
 | | 11 12
18 19 | 10

 | 11
 | | 5 /
3 14 | 8
1 15 | 9
16 | 15 | _
 | 17 18 | 8 19
 | | 21 | SILVER
This specification covers | ASTM-B-700 | | 00.0% |
| | MIL-F-495 | | | 20 | 21 | 22 | 23
 | | 25 26 | 17

 | 18
 | | 0 21 | | 23 | 22 |
 | 24 2 |
 | | 28 | This specification covers
requirements for
electrodeposited coatings of
silver used for engineering | Type I
Type II | | 99.9% min.
99.0% min. |
| FINISH (Black) | | No | Used as a base for lacquer, | 27 | 28 | 29 | 30
 | 31 | | 24

 | 25
 | 26 2 | 7 28 | 8 29 | 30 | 29 | 30
 | 31 |
 | | | purposes that may be matte,
bright, or semibright and are not
less than 98% silver purity. | Type III
Grade A | | 98.0 % min.
Matte | |
| retardant for copper. Coating
has no abrasion resistance.
(1) Notice 2. | | Dimensional
Change | light oil, or wax. For decorative,
optical, and corrosion
retardant application. | | | |
 | | |

 |
 | | | | | |
 | |
 | | | Bi yearly analysis of purity of
deposited silver required.
Tarnish resistance test not | Grade B | | Bright (obtained by the use of
Brighteners) | |
| | | | | | | |
 | | |

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 | | | | | |
 | |
 | | | required | Grade C | | Bright (obtained by polishing of
Grade A coatings) |
| | / / | | | | | |
 | | | A

 |
 | | ma | í ſ | he | | രച്ച
 | | mic
 | shi | na | | Grade D
Class N | | Semibright (obtained by the use
of addition agents)
No supplementary tarnish resist | |
| | | / / | | | | |
 | 9 / 9 | |

 |
 | HOI GI | | | | | Gal
 | | <u>ا</u> اا ت
 | | | | Class S | | (Chromate) treatment
With supplementary tarnish
resist (Chromate) treatment |
| | | | | | PROC | |
 | SPEC | THICKNES | <u> </u>

 | COMMENT
 | rs | | PROCES | | SPEC |
 | KNESS | COI
 | MMENTS | | Class T not available at | Class T | As Specifier ! | (not suitable for food service
applications)
Supplementary Non-Chromate |
| | | | | | ECTR.
NICł | | ין ככ
 | ASTM-B-733 | |

 |
 | | | | | MIL-A-8625 | 5
 | oifi - 1 | loot - 1
 | melle | andire | Alexandria Metal Finishers | Class T | As Specified
(ref. Table 3.1) | Supplementary Non-Chromate
Tarnish Resist. |
| | | | | deposit | % phosphor
it. More stri
etailed than | rinaent. sp |
 | | Range from
0.0002" - | purchase

 | ecification red
r to well defir
 | ne the | black de | ll vary from liq
pending on al
s. Can be dye
epending on t
PENETRATES | oy and
d in darker | Type III | drawin
spe
 | g. If not or
cified se | n process us
erviceability o
re required, o
 | m alloys depe
ed. Where m
or special pro
consult meta | naximum
operties
II | SULFAMATE
NICKEL | MIL-P-27418 | | |
| | | 2 | So . | AMS-24
Orderin | 2404 & AMS
ing data mus | NS-2405 .
ust be com | nplete.
 | | 0.0024" | "type", "c
condition"
method",

 | lass", "servic
", "compositic
etc. on order
 | e
on", "test
ring | the surfa
THICKNE | epending on t
PENETRATES
much as bui
ace. The term
ESS includes | ooth the | | thickne
be O.
 | ess shall fir
002" - co
0004" br | nisher for bes
Datings (over
reak down sh
 | st alloy choic
.004") will t
harp edges. 1 | e. Thick
end to
Typical | The plating conforming to this specification is intended to | See Comments | Unless
otherwise | The nickel plating shall have columnar crystalline structure |
| | X | | | as titar
custom | g on special
anium, etc. r
mer to supp
ntical materi | requires
ply test cou | upons
 | | | document
would have

 | ts. Porosity to
ve to be waive
rrently offered
 | esting
ed as it | build- up
Provides
coating.
vary with | and penetrat
very hard ce
Abrasion res
h alloy and thi | ion.
ramic type
stance will
ckness of | |
 | JUU4 ar
w
et | pplications: h
ear surfaces
 | nydraulic cylir
s, actuating c
sed as an ele | nders,
ams, | facilitate the formation of a seal
between two metalic surfaces.
PLATING HARDNESS. Not to | | otherwise
specified:
0.0020" ±
0.0003" on all | columnar crystalline structure
before annealing.
Unless otherwise specified, the | |
| | | ¥\$`] | | for plat | tical materi
ating adhesic
CTROP(| sion tests. |
 | NO MIL SPEC | |

 |
 | | coating.
propertie
is good,
hard and | Good dielectr
es. Corrosion
but recomme
odize in 5% di | ic
resistance
nd seal
chromate | | Co
great
 | pper "F
er than in | lash" hard a stead of con
 | anodize may b
iventional and | odize for | exceed 150 Knoop hardness
(500 gm. load) after annealing.
(or 300 Knoop before annealing)
inact. Notice 3. | | surfaces that
can be touched
by 0.0625" | bath shall be chloride free.
Certification to this spec is
available only when specific |
| | / / | /// | | Process
or dimi | ss electrolyt
ninishes scra
nwanted sha | ytically rem
ratches, bu | noves
Jrrs
 | | Typical
material |

 | mensional rec
per surface.
 | duction of | solution
corrosion
Where e | where increa
n resistance i
extreme abras
ce is required | sed
s required.
ion | | greato
8%, s
 | r Silicon co
er than m
hall not w | orrosion resis
ore economi
ith other har
 | stance and n
ical in conjun
rd anodized a | nay be
ction
reas. | | | Dia. Ball. | waivers / clarifications /
deviations are received from the
customer (i.e. hardness, |
| | | | | most 3
alloys.
mirror- | nwanted sha
300 series s
Finishes fro
-bright are j
olling time, t | s stainless s
rom satin to
produced l | steel
to
by
 | | removal:
0.0002" | Process is

 | s not recomn
rance surface
 | | | ce is required
some softenin | | | Custo
specify
 | omer to te
type of is | eflon impregn
 | dize is availat
nation also. If
ard anodize s | f Class 1 | | | | thickness, bath, composition,
etc.) |
| COPPER
Copper in color and matte to a | MIL-C-14550 | Unless otherwise | | or both | | • | -
 | VIIL-G-45204 | |

 |
 | | Mil-Std-1 | g will be per
105E unless
se specified | | Class 1 |
 | |
 | n-sealed unles | ss | TIN
Color is gray-white in a plated | MIL-T-10727 | As Specified on | Alexandria Metal Finishers |
| very shiny finish. Good corrosion
resistance when used as
undercoat. A number of copper
processes are available, each | Class O | specified:
0.001 - 0.005" | | | | | 1 .
 | VIIL-G-452114 | |

 |
 | | | | | 0 |
 | st | pecified
 | | | Color is gray-white in a plated condition. Has very high luster in | | 1 · · · · · · · · · · · · · · · · · · · | Alexandria Metal Finisners
provides both "Bright" and
Matte finishes. If not specified, |
| design for a specific purpose:Brightness: To eliminate the need for buffing | Class 1 | | For heat treatment stop-off | on prop | , to orange o
prietary pro | color depe | ending
d.
 | | Unless otherwis
specified: |

 |
 | | | | | Class 2 |
 | st |
 | | / | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet | | drawing.
Thickness guide
(not part of | bright will be generally provided. |
| High speed: For electroforming | 00 | 0.001" min. | For heat treatment stop-off
For carburizing and
decarburizing shield, also plated
through printed circuit board | on prop
Will rar
finish d
Good co
has hig | oprietary pro
ange from m
depending o
corrosion re
oh tarnish r | e color depe
rocess used
matte to br
on basis mo
resistance,
resistance, | ending
d.
right
netal.
and
 | Type I
Type II | | 99.7% ga
99.0% ga

 | old min.
 | | | NICKE | | Class 2 |
 | | pecified
yed
 | | | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications | Туре І | drawing.
Thickness guide | Electrodeposited. Use |
| gram. To prevent | Class 2 | 0.0005" min. | For carburizing and decarburizing shield, also plated | on prop
Will rar
finish d
Good co
has hig
Provide
resistaa
conduct | oprietary pro
ange from m
depending o
corrosion re
gh tarnish r
les a low cor
ance, and is
ctor. Has ex | a color depe
rocess usec
matte to br
on basis mo
resistance,
resistance,
ontact
is a good | ending
d.
right
netal.
and
 | Туре І | | 99.7% ga
99.0% ga
99.9% ga

 | old min.
 | ах. | There is
any need
deposite
bright, d | a nickel finish
d. Nickel can l
d soft or hard
lepending on l | i for almost
be
I - dull or
brocess | |
 | N
SF
D
V
te
gi | oecified
yed
OTE: All ste
ensile streng
reater shall
 | eel parts hav
gth of 220,0
not be nicke | ring a
DOO or
el plated | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate | Type I | drawing.
Thickness guide
(not part of
spec.)
As follows: | |
| Fine grain: To prevent
casehardening
Please note: This specification is
provided for reference only, as it | Class 2
Class 3
Class 4 | | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and | on prop
Will rar
finish d
Good ca
has hig
Provide
resistar
conduct
soldera | pprietary pro
ange from m
depending o
corrosion re
gh tarnish r
les a low cor
ance, and is
ctor. Has ex
ability.
s otherwise
nediate nicke | e color depe
rocess used
matte to bu
ron basis mo
resistance,
resistance,
resistance.
ontact
is a good
excellent
e specified,
kel plate is | ending
d.
right
netal.
and

 | Type I
Type II
Type III
Class 00 | specified:
0.00002" mir | 99.7% go
99.0% go
99.9% go
Grade A S
1. Grade B S

 | old min.
old min.
90 Knoop ma
91-129 Knoo
 | qu | There is
any need
deposite
bright, d
used and
plating.
Can be s | a nickel finish
d. Nickel can
d soft or hard
lepending on
d conditions e
Thus, hardnes
om 150 - 500
similar to stai | n for almost
be
I - dull or
process
mployed in
ss can
) Vickers.
hless steel | AMS-QQ-N-2 | 90
 | N
St
D
V
V
te
gr
W
pr | oecified
yed
OTE: All ste
ensile streng
reater shall
ithout speci
rocuring age
 | gth of 220,0
not be nicke
ific approval
ency. | ring a
DOO or
el plated
of | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified). | Туре І | drawing.
Thickness guide
(not part of
spec.)
As follows:
 | Electrodeposited. Use
ASTM-B-545 as guideline. |
| | Class 3 | 0.0005" min.
0.0002" min | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent | on prop
Will rar
finish d
Good cc
has hig
Provide
resistan
conduct
soldera
Unless
interme
require
or copp
to the g | pprietary pro
ange from m
depending o
corrosion re
gh tarnish r
les a low cor
ance, and is
ctor. Has ex
ability.
s otherwise
ed an coppe
per plated s
gold plating | e color depe
rocess used
matte to br
ron basis mo
resistance,
resistance,
resistance,
ontact
is a good
excellent
excellent
e specified,
kel plate is
per base allo
surfaces p
ng. | ending
d.
right
netal.
and

an
loys
prior
 | Type I
Type II
Type III | specified: | 99.7% go
99.0% go
99.9% go
Grade A 9
. Grade B 9
. Grade C 7

 | old min.
old min.
90 Knoop ma
91-129 Knoo
130 - 200 Kn
 | р
100р | There is
any need
deposite
bright, d
used and
plating.
range fro
Can be s
in color,
light gre
Corrosio
function | a nickel finish
J. Nickel can l
d soft or hard
lepending on j
d conditions e
Thus, hardnee
om 150 - 500
similar to stai
or can be a c
y (almost whi
n resistance
of thickness. | a for almost
be
I - dull or
process
mployed in
ss can
) Vickers.
hless steel
lull grey or
ce) color.
is a
Has a low | AMS-QQ-N-25
Class 1
Grade A | 90
 | N
SF
D
N
te
gr
W
p
v
F(
6" min. V
2" min. U | OTE: All ste
or corrosion
Vith typical C
ndercoating
 | gth of 220,0
not be nicke
ific approval
ency.
n protection.
0.0002" cop
prior to the | ring a
DOO or
al plated
of
opper
a nickel | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by | Type I | drawing.
Thickness guide
(not part of
spec.)
As follows:
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing |
| Please note: This specification is provided for reference only, as it | Class 3 | 0.0005" min.
0.0002" min | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes | Type I | drawing.
Thickness guide
(not part of
spec.)
As follows:
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below). | Class 3
Class 4 | 0.0005" min.
0.0002" min | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
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Class 4 | specified:
0.00002" mir
0.00003" mir
0.00005" mir
0.00010" mir
0.00020" mir
0.00030" mir | 99.7% go
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99.9% go
Grade A 9
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
 | Type I
Type II | drawing.
Thickness guide
(not part of
spec.)
As follows:
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec, to supersede | Class 3
Class 4 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability). | on prop
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0.00002" mir
0.00003" mir
0.00005" mir
0.00010" mir
0.00020" mir
0.00030" mir
0.00050" mir | 99.7% go
99.0% go
99.9% go
Grade A S
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good. (Coated item should meet
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requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at | | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0002 -
0.0006" | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550 | Class 3
Class 4
AMS-2418 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" - | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability). | on prop
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Class 5 | specified:
0.00002" mir
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0.00005" mir
0.00010" mir
0.00020" mir
0.00030" mir | 99.7% go
99.0% go
99.9% go
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Grade B S
Grade C 2
Grade D a
Grade D a

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91-129 Knoo
130 - 200 Kn
above 200 Kr
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Grade A only)
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers). | Type II
ASTM-B-545
Class A | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec, to supersede | Class 3
Class 4 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" - | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability). | on prop
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0.00002" mir
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0.00020" mir
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0.00050" mir | 99.7% go
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Grade A S
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ons. | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
TIN
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn | Type II
ASTM-B-545 | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006" | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not | Class 3
Class 4
AMS-2418
AMS-C-26074 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" - | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability).
Copper flash about 0.0001"
Preproduction approval required
or must be waived in writing.
Customer to specify the the Rc
hardness of steel and if it is
greater than RC40, whether the | on prop
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ASTM-B-488 | specified:
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0.00010" mir
0.00020" mir
0.00030" mir
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Rc- 40 or
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
TIN
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050". ontional
 | Type II
ASTM-B-545
Class A
Class B
Class C
Class D | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers) |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used | Class 3
Class 4
AMS-2418
AMS-C-26074 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007" | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability).
Copper flash about 0.0001"
Preproduction approval required
or must be waived in writing.
Customer to specify the the Rc
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0.00002" mir
0.00003" mir
0.00005" mir
0.00020" mir
0.00020" mir
0.00050" mir
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0.00150" mir | 99.7% go
99.0% go
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Grade A 9
Grade B 9
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Grade C
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metals.
ons. | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
TIN
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least.
 | Type II
ASTM-B-545
Class A
Class B
Class C | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"

0.0001" min.
0.0002" min.
0.00022" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers) |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CLECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly | Class 3
Class 4
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 2 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007" | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. | Alternas
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ASTM-B-488 | specified:
0.00002" mir
0.00003" mir
0.00005" mir
0.00020" mir
0.00020" mir
0.00050" mir
0.00050" mir
0.00150" mir | 99.7% go
99.0% go
99.9% go
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Grade B 9
Grade C 4
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good. (Coated item should meet
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requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for
reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.00050", optional
co-denosited lead in the range | Type II
ASTM-B-545
Class A
Class B
Class C
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Class E
Type Matte
Type Bright
Type Flow | drawing.
Thickness guide
(not part of
spec.)
As follows:
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0.0006" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the | Class 3
Class 4
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007" | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve | Alternas
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ASTM-B-488
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for
reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.00050", optional
co-denosited lead in the range | Type II
ASTM-B-545
Class A
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Class E
Type Matte
Type Bright | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
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0.0003 min
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0.0006"
0.0006"
0.0002" min.
0.0002" min.
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0.0006" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel. | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
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Class 4 | 0.0005" min.
0.0002" min
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Unless
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0.0005" -
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Unless otherwise
specified: | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion | Alternas
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ASTM-B-488 | specified:
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0.00020" mir
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0.00150" mir | 99.7% gd 99.0% gd 99.0% gd 99.9% gd Grade A S Grade C 4 Grade C 4 Grade C 4 Grade C 4 Grade D 4 Type I (Gr Type II (Gr Alexandria performs Only Other Performs 99.7% gd 99.0% gd 99.0% gd 99.9% gd 90 HK(25) 91-129 H 130 - 200 200 min I

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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for
reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"

0.0002 min.
0.0002 min.
0.0002 min.
0.0002" min.
0.00032" min.
0.00032" min.
0.0006" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 2
Class 3 | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007" | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. | Alternas
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Class 5
Class 6
ASTM-B-488
Type I
Type II
Type II
Code A
Code B
Code C | specified:
0.00002" mir
0.00003" mir
0.00005" mir
0.00020" mir
0.00030" mir
0.00050" mir
0.00150" mir
0.00150" mir
Unless otherwis
specified:
Purity
Hardness | 99.7% gd 99.0% gd 99.9% gd Grade A S Grade C 4 Grade D 4 Type I (Gr Grade D 4

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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"
0.0006"
0.0002" min.
0.0002" min.
0.0002" min.
0.0002" min.
0.0002" min.
0.0002" min.
0.0002" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 2
Class 3
Class 3
Class 4
Grade A | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007"
Unless otherwise
specified: | For carburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. | Alternas
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Class OO
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Class 3
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Class 5
Class 6
ASTM-B-488
ASTM-B-488
Type I
Type II
Type II
Type II
Code A
Code B
Code C
Code D
Class
 | specified:
0.00002" mir
0.00003" mir
0.00005" mir
0.00020" mir
0.00030" mir
0.00050" mir
0.00150" mir
0.00150" mir
0.00150" mir
Hardness
Hardness
Thickness | 99.7% gd 99.0% gd 99.9% gd Grade A S Grade C 4 Grade C 4 Grade C 4 Grade C 4 Grade D a Type I (Gr Join Type II (Gr Alexandria performs Only Other Performs 99.7% gd 99.7% gd 99.7% gd 99.7% gd 99.7% gd 99.9% gd 99.9% gd 90 HK(25) 91-129 H 130 - 200 200 min I Thickness a Minimum ir 0.25, 0.50 Alexandria Grade A &

 | old min.
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91-129 Knoo
130 - 200 Kn
above 200 Kr
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rade B, C or
Grade A only)
a Metal Finisl
Grade A & G
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old min.
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/A @AMF
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Class 2
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AMS-2403
Type II
Type IV | 90
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addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.00050", optional
co-deposited lead in the range
of 2-12% may be specified
Either a matte or luster is
acceptable. Has excellent
solderability. 0.0002" copper
nate comperender copper
provided is the sevent of the se | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"

0.0002 min.
0.0002 min.
0.0002 min.
0.0002"
min.
0.00032" min.
0.00032" min.
0.0006" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is | Class 3
Class 4
AMS-2418
AMS-2418
AMS-2418
Class 1
Class 1
Class 2
Class 3
Class 3
Class 4
Grade A
Grade B
Grade C | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007"
Unless otherwise
specified: | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade A. Cu. Ni. Co alloys will be Grade A. | Alterna
Alterna
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may be
addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
Either a matte or luster is
acceptable. Has excellent
solderability. 0.0002" copper | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728 | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
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0.0002 min.
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0.00012" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COPPER
Atternate spec. to supersede
MIL-C-14550
CECETEROLESS
NICCEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available. | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 1
Class 2
Class 3
Class 3
Class 4
Grade A
Grade B
Grade C | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007"
Unless otherwise
specified:
0.0005" min.
0.0005" min.
0.0005" min. | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade A. | Alterna
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ASTM-B-488
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on
steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
Either a matte or luster is
acceptable. Has excellent
solderability. 0.0002" copper
plate generally required on
copper base alloys. No
undercoating required on steel | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728 | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"

0.0002 min.
0.0002" min.
0.0002" min.
0.0002" min.
0.00032" min.
0.0006" min.
0.00012" min.
0.00012" min.
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0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers. |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 1
Class 2
Class 3
Class 3
Class 4
Grade A
Grade A
Grade B
Grade C | 0.0005" min.
0.0002" min
0.0001" min.
Unless
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specified:
0.0005" -
0.0007"
Unless otherwise
specified:
0.0005" min.
0.0005" min.
0.0005" min. | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade A. Cu. Ni. Co alloys will be Grade A. | Alterna
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addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
 | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
AMS-P-81728 | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
0.0002 -
0.0006"

0.0002 min.
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0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers. |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available. | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
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Grade A
Grade B
Grade C | 0.0005" min.
0.0002" min
0.0001" min.
Unless
otherwise
specified:
0.0005" -
0.0007"
Unless otherwise
specified:
0.0005" min.
0.0005" min.
0.0005" min. | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade A. Cu. Ni. Co alloys will be Grade A. | Alterna
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addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
 | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
AMS-P-81728 | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
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0.0006"

0.0002 min.
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0.0006" min.
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0.00012" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers. |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Atternate spec. to supersede
MIL-C-14550
ELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available.
ELECTROLESS
NUCKEL
No definition of phosphorous
content in the EN deposit. No
"Grade" designation.
Plating on special metals such
as titanium, etc. requires
customer to supply test coupons | Class 3
Class 4
AMS-2418
AMS-2418
AMS-C-26074
(MIL-C-26074)
Class 1
Class 1
Class 2
Class 3
Class 3
Class 4
Grade A
Grade B
Grade C | 0.0005" min.
0.0002" min
0.0001" min.
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0.0005" -
0.0007"
Unless otherwise
specified:
0.0005" min.
0.0010" min.
0.0005" min.
0.0015" min.
0.0015" min. | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade B. Ferrous alloys will be Grade C. Note: Unless a specific class is | Alterna
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ASTM-B-488
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st
may be
addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
Either a matte or luster is
aceptable. Has excellent
solderability. 0.0002" copper
plate generally required on
supstrates unless
specified.
The MIL-P-81728 specification
has been superseded by the
AMS-P-81728 specification.
ZINC | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
AMS-P-81728
Standard
composition
60/40 Sn-Pb
0ptional
composition
90/10 Sn-Pb
95/5 Sn-Pb | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0003 min
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0.00012" min.
0.00012" min.
0.00012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers.
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead |
| Please note: This specification is
provided for reference only, as it
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
ELECTROLESS
Similar to stainless steel in
color. Plates uniformly in
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
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deposit provided by electroless process).
This specify the phosphorous
content in the EN deposit. No
"Grade" designation.
Plating on special metals such
as titanium, etc. requires | Class 3
Class 4
AMS-2418
AMS-2418
AMS-24074
(MIL-C-26074)
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Class 2
Class 3
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Class 4
Grade A
Grade A
Grade B
Grade C
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0.0015" min. | For carburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade B. Ferrous alloys will be Grade B. Ferrous alloys will be Grade C. Note: Unless a specific class is specified; Class 1 shall be supplied. Except for hydrogen embrittlement relief, no postplating thermal treatment. Thermal treatment at 450°F (232°C) or above to harden the deposit, | Alterna
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L-DTL-45204 | specified: 0.00002" mir 0.00003" mir 0.00005" mir 0.00020" mir 0.00050" mir 0.00050" mir 0.00050" mir 0.00150" mir 0.00150" mir 0.00150" mir 0.00150" mir 0.00150" mir 0.00050" mir 0.00050" mir 0.00050" mir 0.00050" mir 0.00000" mir 0.00002" mir | 99.7% gd 99.0% gd 99.0% gd 99.9% gd Grade A S Grade C 4 Grade C 4 Grade C 4 Grade D a Type II (Gr Harrow Construction Alexandria performs ON Alexandria 99.7% gd 99.7% gd <td>old min.
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ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
orbital lawe a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
Ether a matte or luster is
acceptable. Has excellent
solderability. 0.0002" copper
plate generally required on steel
substrates unless specified.
The MIL-P-81728 specification
has been superseded by the
AMS-P-81728 specification.
Ether a bright or dull finish is
acceptable. Bright zinc plating
closely resembles bright
chromium. However, bright zinc</td> <td>Type II
ASTM-B-545
Class A
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Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
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AMS-P-81728
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Thickness guide
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ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers.
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead</td> | old min.
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addition | fused condition. Soft, but is very
ductile. Corrosion resistance is
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper alloys
orbital lawe a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
Ether a matte or luster is
acceptable. Has excellent
solderability. 0.0002" copper
plate generally required on steel
substrates unless specified.
The MIL-P-81728 specification
has been superseded by the
AMS-P-81728 specification.
Ether a bright or dull finish is
acceptable. Bright zinc plating
closely resembles bright
chromium. However, bright zinc | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
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Thickness guide
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spec.)
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0.0002" min.
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0.0012" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Flow brightening not currently
available at Alexandria Metal
Finishers.
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
orcesses and cavities (does not
build up on edges). Corrosion
recesses not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available.
No definition of phosphorous
content in the EN deposit. No
"Grade" designation.
Plating on special metals such
as titanium, etc. requires
customer to supply test coupons
of identical material to be used
for plating adhesion tests. | Class 3
Class 4
AMS-2418
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Class 1
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Unless otherwise
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0.0015" min. | For carburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade B. Ferrous alloys will be Grade C. Note: Unless a specific class is specified, Class 1 shall be supplied. Except for hydrogen embrittlement relief, no postplating thermal treatment. | Alterna
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s not specific
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st
may be
addition | fused condition. Soft, but is very
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-545 (see below) and
ASTM-B-545 (see below) and
ASTM-B-359 (not available at
Alexandria Metal Finishers). | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
AMS-P-81728
Composition
60/40 Sn-Pb
Optional
composition
90/10 Sn-Pb
0710 Sn-Pb | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
0.0004"
0.0002 -
0.0006"

0.0006"
min.
0.0002" min.
0.0002" min.
0.0002" min.
0.0012" min.
0.0012" min.
0.0012" min.
0.0005" min. | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Elow brightening not currently
available at Alexandria Metal
Finishers.
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COOPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available.
No definition of phosphorous
content in the EN deposit. No:
"Grade" designation.
Plating on special metals such
as titanium, etc. requires
customer to supply test coupons
of identical material to be used
for plating adhesion tests. | Class 3
Class 4
AMS-2418
AMS-2418
AMS-24074
(MIL-C-26074)
Class 1
Class 2
Class 3
Class 3
Class 3
Class 4
Grade A
Grade A
Grade B
Grade C
For plating on tit
customer to sup
coupons for add | 0.0005" min.
0.0002" min
0.0001" min.
Unless
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0.0005" -
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Unless otherwise
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0.0015" min. | For carburizing and
decarburizing shield, also plated
through printed circuit board
As an undercoat for nickel and
other platings.
to prevent basis metal
migration into tin (prevent
poisoning solderability).
Copper flash about 0.0001"
Preproduction approval required
or must be waived in writing.
Customer to specify the the Rc
hardness of steel and if it is
greater than RC40, whether the
steel is carburized.
As Coated
Steel and other base metals
heat treatable to improve
hardness.
Aluminum alloy, heat treatable,
processed to improve adhesion
of nickel deposit.
Aluminum alloy, heat treatable,
processed to improve adhesion
of nickel deposit.
Unless otherwise specified:
Aluminum alloys will be Grade A.
Cu, Ni, Co alloys will be Grade B.
Ferrous alloys will be Grade C.
Note: Unless a specific class is
specified, Class 1 shall be supplied.
Except for hydrogen embrittlement
treatment.
Thermal treatment at 450°F (232°C)
or above to harden the deposit,
hardness to 800 HK min.
Thermal treatment at 375°F (191°C) | Alterna
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addition | fused condition. Soft, but is very
good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In general, copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
D.000050", optional
co-deposited lead in the range
of 2-12% may be specified.
The MIL-P-81728 specification
has been superseded by the
AMS-P-81728 specification.
AMS-P-81728 specification
in
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AMS-P-81728 specification
cospet base alloys. No
undercoating required on steel
substrates unless specified. | Type II
ASTM-B-545
Class A
Class B
Class C
Class D
Class E
Type Matte
Type Bright
Type Flow
Brightened
AMS-P-81728
AMS-P-81728
AMS-P-81728
Composition
60/40 Sn-Pb
Optional
composition
90/10 Sn-Pb
or
95/5 Sn-Pb | drawing.
Thickness guide
(not part of
spec.)
As follows:
0.0001-
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ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
Elow brightening not currently
available at Alexandria Metal
Finishers.
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless mot
build pon edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless when
thickness is over 1 mil and
non-destructive test method is
not available.
ELECTROLESS
NICKEL
No definition of phosphorous
content in the EN deposit. No
"Grade" designation.
Plating on special metals such
as titanium, etc. requires
customer to supply test coupons
of identical material to be used
for plating adhesion tests. | Class 3
Class 4
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AMS-2418
AMS-24074
(MIL-C-26074)
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Class 3
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Grade A
Grade A
Grade B
Grade C
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0.0015" min. | For carburizing and decarburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloys will be Grade A. Cu, Ni, Co alloys will be Grade B. Ferrous alloys will be Grade B. Ferrous alloys will be Grade C. Note: Unless a specific class is specified, Class 1 shall be supplied. Except for hydrogen embrittlement relief, no postplating thermal treatment. Thermal treatment at 375°F (191°C) to improve adhesion for non heattreatable allowing thermal treatment. | Alterna
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good. (Coated item should meet
24 hour 5% salt spray
requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information: base
metal, underplating, test
requirements, test methods,
etc. In
general, copper alloys
containing more than 5% Zn
shall have a copper undercoating
of at least 0.0001" or nickel
undercoating of at least
0.000050", optional
co-deposited lead in the range
of 2-12% may be specified
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co-deposited lead in the range
of 2-12% may be specified
Either a matte or luster is
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plate generally required on steel
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The MIL-P-81728 specification
has been superseded by the
AMS-P-81728 specification.
Either a bright or dull finish is
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AMS-P-81728
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Standard
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90/10 Sn-Pb
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95/5 Sn-Pb
35/5 Sn-Pb</td><td>drawing.
Thickness guide
(not part of
spec.)
As follows:
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0.00025"
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ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important.
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
0.0008" min. for steel
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead
The primary use of chromate
finishes on zinc is to retard or
prevent formation of white
corrosion products on zinc
surfaces.
The primary purpose of phosphate
coating on zinc is to previde a
paint base. We currently offer</td> | old min.
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temperature applications
(changes structure and loses
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temperature below -40°C). Plate
directly on steel substance (no
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ASTM-B-545 (see below) and
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ASTM-B-545
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Type Flow
Brightened
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Thickness guide
(not part of
spec.)
As follows:
0.0001-
0.00025"
0.0002 -
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0.0002" min.
0.0002" min.
0.0002" min.
0.0012" min.
0.0012" min.
0.0012" min.
0.0005"
 | Electrodeposited. Use
ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important.
To prevent formation of case
hardening during nitriding.
Hot dipped (not currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
0.0008" min. for steel
0.0008" min. for steel
50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead
The primary use of chromate
finishes on zinc is to retard or
prevent formation of white
corrosion products on zinc
surfaces.
The primary purpose of phosphate
coating on zinc is to previde a
paint base. We currently offer |
| Please note: This specification is
has been superseded by
AMS-2418 (See below).
COPPER
Alternate spec. to supersede
MIL-C-14550
CELECTROLESS
NICKEL
Similar to stainless steel in
color. Plates uniformly in
recesses and cavities (does not
build up on edges). Corrosion
resistance is good for coating
over 0.001" thickness.
Electroless nickel is used
extensively in salvage of
mismachined parts. Also, for
inside dimensions and irregular
shapes (where assembly
tolerances need uniformity
provided by electroless process).
This spec does not specify the
phosphorous content in the EN
deposit provided it passes 100
hours salt test at 1.0 mil for AL
and 1.5 mil for steel.
Microsectioning to determine
coating thickness may be
required under this spec when
thickness is over 1 mil and
non-destructive test method is
not available.
No definition of phosphorous
content in the EN deposit. No
"Grade" designation.
Plating on special metals such
as titanium, etc. requires
customer to supply test coupons
of identical material to be used
for plating adhesion tests.
Specs require the EN to pass 48
hours salt spray test for steel
(at 1.0 mil min.)
Specifications require no
production parts
unless preproduction samples
have been approved or waived in
writing by purchaser. EN deposit
my be hardened by heating at
750° F for steel, but only | Class 3
Class 4
AMS-2418
AMS-2418
AMS-24074
(MIL-C-26074)
Class 1
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Grade A
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For plating on tit
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Unless otherwise
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0.0015" min. | For carburizing shield, also plated through printed circuit board As an undercoat for nickel and other platings. to prevent basis metal migration into tin (prevent poisoning solderability). Copper flash about 0.0001" Preproduction approval required or must be waived in writing. Customer to specify the the Rc hardness of steel and if it is greater than RC40, whether the steel is carburized. As Coated Steel and other base metals heat treatable to improve hardness. Aluminum alloy, heat treatable, processed to improve adhesion of nickel deposit. Unless otherwise specified: Aluminum alloy swill be Grade A. Cu, Ni, Co alloys will be Grade B. Ferrous alloys will be Grade C. Note: Unless a specific class is specified, Class 1 shall be supplied. Except for hydrogen embrittlement relief, no postplating thermal treatment. Thermal treatment at 375°F (191°C) to improve adhesion for non heat-treatable alon for heat-treatable alon for heat-treatable alon for heat-treatable alon for non heat-treatable alon for heat-treatable alon for heat-treatable alon for heat-treatabl | Alterna
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requirement). Solderability is
excellent. Tin is not good for low
temperature applications
(changes structure and loses
adhesion when exposed to
temperature below -40°C). Plate
directly on steel substance (no
undercoating for steel unless
otherwise specified).
Please Note: This specification is
provided for reference purposes
only as it has been superseded by
ASTM-B-545 (see below) and
ASTM-B-339 (not available at
Alexandria Metal Finishers).
ASTM requires purchaser to
supply information; base
metal east 0.0001" on ickel
undercoating of at least
0.00050", optional
co-deposited lead in the range
of 2-12% may be specified
The MIL-P-81728 specification
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AMS-P-81728 specification.
The MIL-P-81728 specification
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Either a bright or dull finish is
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The MIL-P-81728 specification
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Class D
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Fe/Zn25 SC4
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Fe/Zn12 SC3
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Fe/Zn5 SC1
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Thickness guide
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ASTM-B-545 as guideline.
Flash for soldering
To prevent galling and seizing
Where corrosion resistance is
important
To prevent formation of case
hardening during nitriding.
Hot dipped (not
currently
available at Alexandria Metal
Finishers)
0.0004" min. for steel
0.0008" min. for steel
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50% - 70% Tin, remainder is
Lead
Nominal 88% - 97% Tin,
remainder is Lead
The primary use of chromate
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