

Solder Paste: **Indium7.16**

Revision Date: 5-Jan-2015

Process Type: Assembly Cleaning

Aquanox® A4625
Aquanox® A4639
Aquanox® A4703

LEGEND	
5	Wrong Choice
4	Generally not usable for this purpose
3	Generally usable, but not the best choice
2	Generally qualified for this purpose
1	Especially made for this purpose

FEATURES & CLASSIFICATION
BiX Alloy - Replacement solder paste for high lead(Pb)
Halogen Free
Formulated for automated SMT printing applications
IPC to J-STD-004B - ROH0
Material compatibility should be verified with every process change.

CLEANING PROCESS			
	A4625	A4639	A4703
Flexible Printed Circuits	1	1	3
MIL-STD and Aerospace	1	1	3
Med-Rel Electronics	1	1	3
Double Sided SMT	1	1	3
Ceramic Hybrids	1	1	3
Advanced Packages	1	2	4

CLEANING PROCESS			
	A4625	A4639	A4703
Color	Amber	Clear	Straw
Odor	Mild	Mild	Mild
Flashpoint COC [drg c]	None to Boil	None to Boil	None to Boil
Boiling point 1000 mBar [dgr C]	165-170°C	101°C	138°C
VOC content - Method 24 [g/L]	942 g/L	615 g/L	900 g/L
Surface tension 20 dgr C [dynes/cm]	31 dynes/cm	NE	30 dynes/cm


METHOD			
Cold Cleaning (CC)	4	4	4
Hot Liquid Cleaning (HLC)	1	1	1
Vapor Phase Cleaning (VPC)	5	5	5
Ultrasonic (US)	3	4	3
Spray Under Immersion (SUI)	3	4	4
Batch Spray In Air (SIA)	A4625B	1	1
Inline Spray in Air	1	2	1
Rework / Manual	4	4	4

DILUTED PROPERTIES			
pH as delivered	9.0-10.0	10.5-11.5	9.1-9.9
Min concentration in water [% w/w]	5%	4%	3%
Max concentration in water [% w/w]	20%	20%	20%
pH @ 1.0% Solution	9.5	10.0	9.1
Thinner	DI-water	DI-water	DI-water
Recommended process temperature	40-65°C	50-65°C	50-65°C

PROCESS CAPABILITY			
Non Flash process	1	1	1
ECO Friendly process	2	2	2
Distillable process	5	5	5
Biodegradable process	2	2	2
Fast Drying	4	4	4
Solder Joint Appearance	1	2	1
Cosmetic cleanliness	1	1	1
DI Rinsing	1	1	1
Cleaning Before Conformal Coating	1	1	1

PRODUCT DOCUMENTATION	
RoHS Declaration of Conformity	Available
REACH Declaration of Conformity	Available
Certificates of Compliance and Analysis	Available
Product Supplement	Available in English

CONTROL METHOD			
Refractive Index	3	1	1
Titration	3	3	3
Phase Split Method	1	4	4

PACKAGING AND STORAGE	
Packaging can (HDPE) [liter / gallon]	5 / 1
Packaging can (HDPE) [liter / gallon]	25 / 5
Packaging Drum (HDPE) [liter / gallon]	200 / 55
Recommended shelf-life	5-Years in Unopened Containers of 25L or more
Storage temperature	Cool/Dry/Controlled Conditions
Personal Handling Conditions	

RELIABILITY			
Low Ionic contamination	1	1	1
No corrosion	1	2	2
High SIR	1	1	1

Please refer to the product Safety Data Sheet (SDS) for complete safety information.

- ✓ KYZEN is an ISO 9001:2008 certified company.
- ✓ KYZEN products DO NOT CONTAIN, in any amount, substances prohibited by EU Directive 2011/65/EU, Restriction of Hazardous Substances (RoHS).
- ✓ KYZEN products comply with EU Directive 1907/2006/EC, Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and DO NOT CONTAIN, in any amount, constituents defined by REACH as Substances of Very High Concern (SVHC).

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Solder Paste: **Indium7.16**
 Revision Date: 5-Jan-2015
 Process Type: Maintenance Cleaning

 Cybersolv® C8502
 Cybersolv® C8508
 KYZEN® E5321

LEGEND	
5	Wrong Choice
4	Generally not usable for this purpose
3	Generally usable, but not the best choice
2	Generally qualified for this purpose
1	Especially made for this purpose

CLEANING PROCESS			
	C8502	C8508	E5321
Wave Solder Pallets	n/a	n/a	n/a
Wave Solder Fingers	n/a	n/a	n/a
Reflow Oven Interior	1	1	3
Reflow Oven Filters / Condenser	1	1	3
Flux Traps	1	1	3
Spray Fluxer	n/a	n/a	n/a

METHOD			
Cold Cleaning (CC)	1	1	1
Hot Liquid Cleaning (HLC)	3	3	2
Ready To Use	1	1	5
Ultrasonic (US)	1	1	1
Spray Under Immersion (SUI)	1	1	1
Batch Spray In Air (SIA)	4	4	2
Inline Spray in Air	4	4	3
Rework / Manual	1	1	3

PROCESS CAPABILITY			
Non Flash process	2	2	2
ECO Friendly process	2	2	3
Distillable process	5	5	5
Biodegradable process	2	2	2
Fast Drying	2	2	3
Solder Joint Appearance	4	4	4
Cosmetic cleanliness	1	1	1
DI Rinsing	2	2	1
Cleaning Before Conformal Coating	3	3	3

CONTROL METHOD			
Refractive Index	n/a	n/a	1
Titration	n/a	n/a	2
Phase Split Method	n/a	n/a	n/a


RELIABILITY			
Low Ionic contamination	4	4	4
No corrosion	2	2	2
High SIR	4	4	4

FEATURES & CLASSIFICATION
BiX Alloy - Replacement solder paste for high lead(Pb)
Halogen Free
Formulated for automated SMT printing applications
IPC to J-STD-004B - ROH0
Material compatibility should be verified with every process change.

CLEANING PROCESS			
	C8502	C8508	E5321
Color	Colorless	Amber	Straw
Odor	Mild	Mild	Mild
Flashpoint COC [drg c]	None to Boil	None to Boil	None to Boil
Boiling point 1000 mBar [dgr C]	>93°C	105°C	103°C
VOC content - Method 24 [g/L]	503.2 g/L	339 g/L	477.4 g/L
Surface tension 20 dgr C [dynes/cm]	28 dynes/cm	31 dynes/cm	30 dynes/cm

DILUTED PROPERTIES			
pH as delivered	11.0 - 12.0	9.0-11.0	>13
Min concentration in water [% w/w]	Ready to use	Ready to use	3%
Max concentration in water [% w/w]	Ready to use	Ready to use	10%
pH @ 1.0% Solution	10.5	10.7	12.2
Thinner	n/a	n/a	DI-water
Recommended process temperature	20-60°C	Ambient	20-40°C

PRODUCT DOCUMENTATION	
RoHS Compliance Certificate	Available
REACH Compliance Certification	Available
Certificates of Compliance and Analysis	Available
Product Supplement	Available in English

PACKAGING AND STORAGE	
Packaging can (HDPE) [liter / gallon]	5 / 1
Packaging can (HDPE) [liter / gallon]	25 / 5
Packaging Drum (HDPE) [liter / gallon]	200 / 55
Recommended shelf-life	5-Years in Unopened Containers of 25L or more
Storage temperature	Cool/Dry/Controlled Conditions
Personal Handling Conditions	

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Solder Paste: **Indium7.16**
 Revision Date: 5-Jan-2015
 Process Type: Solvent Cleaning

Ionox® I3302
Micronox® MX2501
Cybersolv® 141-R

LEGEND	
5	Wrong Choice
4	Generally not usable for this purpose
3	Generally usable, but not the best choice
2	Generally qualified for this purpose
1	Especially made for this purpose

CLEANING PROCESS			
	I3302	MX2501	141-R
Flexible Printed Circuits	1	1	2
MIL-STD and Aerospace	1	1	2
Med-Rel Electronics	1	1	2
Double Sided SMT	1	1	2
Ceramic Hybrids	1	1	2
Advanced Packages	1	1	2

METHOD			
Cold Cleaning (CC)	3	3	1
Hot Liquid Cleaning (HLC)	1	5	5
Vapor Phase Cleaning (VPC)	5	1	5
Ultrasonic (US)	2	2	5
Spray Under Immersion (SUI)	1	2	5
Batch Spray In Air (SIA)	4	5	5
Inline Spray in Air	4	5	5
Rework / Manual	3	5	1

PROCESS CAPABILITY			
Non Flash process	3	1	2
ECO Friendly process	2	2	3
Distillable process	3	1	2
Biodegradable process	2	4	3
Fast Drying	3	1	1
Solder Joint Appearance	1	1	1
Cosmetic cleanliness	1	1	1
DI Rinsing	2	5	5
Cleaning Before Conformal Coating	3	2	3

CONTROL METHOD			
Refractive Index	4	n/a	n/a
Titration	4	n/a	n/a
Phase Split Method	5	n/a	n/a


RELIABILITY			
Low Ionic contamination	1	2	2
No corrosion	2	1	1
High SIR	1	2	2

FEATURES & CLASSIFICATION
BiX Alloy - Replacement solder paste for high lead(Pb)
Halogen Free
Formulated for automated SMT printing applications
IPC to J-STD-004B - ROH0
Material compatibility should be verified with every process change.

CLEANING PROCESS			
	I3302	MX2501	141-R
Color	Straw	Colorless	Colorless
Odor	Mild	Characteristic	Ethereal
Flashpoint COC [drg c]	82°C	None to Boil	None to Boil
Boiling point 1000 mBar [dgr C]	150°C	44°C	47°C
VOC content - Method 24 [g/L]	1034.9 g/L	878 g/L	1175 g/L
Surface tension 20 dgr C [dynes/cm]	32 dynes/cm	24 dynes/cm	26 dynes/cm

DILUTED PROPERTIES			
pH as delivered	9.5-10.4	Neutral	Neutral
Min concentration in water [% w/w]	Ready to use	Ready to use	Ready to use
Max concentration in water [% w/w]	Ready to use	Ready to use	Ready to use
pH @ 1.0% Solution	9.9	n/a	n/a
Thinner	n/a	n/a	n/a
Recommended process temperature	40-60°C	44-46°C	Ambient

PRODUCT DOCUMENTATION	
RoHS Compliance Certificate	Available
REACH Compliance Certification	Available
Certificates of Compliance and Analysis	Available
Product Supplement	Available in English

PACKAGING AND STORAGE		
Packaging can [kg / pound]	5/1(HDPE) [l/g]	4/9 (Steel)
Packaging can [kg / pound]	25/5(HDPE) [l / g]	20/45 (Steel)
Packaging drum [kg / pound]	200/55(HDPE) [l / g]	200/440(Steel)
Recommended shelf-life	5-Years in Unopened Containers of 25L or more	
Storage temperature	Cool/Dry/Controlled Conditions	
Personal Handling Conditions		

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Solder Paste: **Indium7.16**
 Revision Date: 5-Jan-2015
 Process Type: Stencil Cleaning

KYZEN® E5611
Cybersolv® C8882
Aquanox® A8820

LEGEND	
5	Wrong Choice
4	Generally not usable for this purpose
3	Generally usable, but not the best choice
2	Generally qualified for this purpose
1	Especially made for this purpose

CLEANING PROCESS			
	E5611	C8882	A8820
Under Stencil Wipe Cleaning	4	1	5
Squeegees / Blades / Hardware	1	1	1
Stencils Poly - Pump Print	1	1	1
Stencils Metal	1	1	1
Single Side Misprint	2	2	2
Double Side Misprint	2	4	4
Uncured SMT Adhesives	1	1	3

METHOD			
Cold Cleaning (CC)	2	1	3
Hot Liquid Cleaning (HLC)	1	2	1
Ready to use available	Yes	1	Yes
Ultrasonic (US)	2	2	4
Spray Under Immersion (SUI)	2	2	3
Batch Spray In Air (SIA)	1	5	1
Inline Spray in Air	3	5	3

PROCESS CAPABILITY			
Non Flash process	2	1	1
ECO Friendly process	1	1	2
Distillable process	5	5	5
Biodegradable process	2	2	2
Fast Drying	3	2	4
Solder Joint Appearance	1	1	1
Cosmetic cleanliness	2	2	1
DI Rinsing	2	2	2
Cleaning Before Conformal Coating	3	3	3

CONTROL METHOD			
Refractive Index	1	n/a	5
Titration	4	n/a	5
Phase Split Method	2	n/a	1


RELIABILITY			
Low Ionic contamination	2	2	1
No corrosion	1	2	2
Nano Coating Safe	1	1	1

FEATURES & CLASSIFICATION
BiX Alloy - Replacement solder paste for high lead(Pb)
Halogen Free
Formulated for automated SMT printing applications
IPC to J-STD-004B - ROH0
Material compatibility should be verified with every process change.

CLEANING PROCESS			
	E5611	C8882	A8820
Color	Colorless	Colorless	Colorless
Odor	Mild citrus	Mild	Mild
Flashpoint COC [drg c]	None to Boil	61°C	>93°C
Boiling point 1000 mBar [dgr C]	103°C	132°C	144°C
VOC content - Method 24 [g/L]	822 g/l	875.6	884.5 g/L
Surface tension 20 dgr C [dynes/cm]	36	NE	28

DILUTED PROPERTIES			
pH as delivered	Neutral	N/A	N/A
Min concentration in water [% w/w]	20%	Ready to use	N/A
Max concentration in water [% w/w]	100%	Ready to use	25%
pH @ 1.0% Solution	7.0	N/A	N/A
Thinner	DI-water	N/A	DI-water
Recommended process temperature	20-45°C	Ambient	20-45°C

PRODUCT DOCUMENTATION	
RoHS Compliance Certificate	Available
REACH Compliance Certification	Available
Certificates of Compliance and Analysis	Available
Product Supplement	Available in English

PACKAGING AND STORAGE	
Packaging can (HDPE) [liter / gallon]	5 / 1
Packaging can (HDPE) [liter / gallon]	25 / 5
Packaging Drum (HDPE) [liter / gallon]	200 / 55
Recommended shelf-life	5-Years in Unopened Containers of 25L or more
Storage temperature	Cool/Dry/Controlled Conditions
Personal Handling Conditions	

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