



# ABC<sup>®</sup>Metals, Inc.

*UNCOIL THE POWER OF ABC METALS*

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*April 14<sup>th</sup>, 2016*

**Subject: Compliance to RoHS, GADL, TSZ0001G Restrictions on Substances of Concern.**

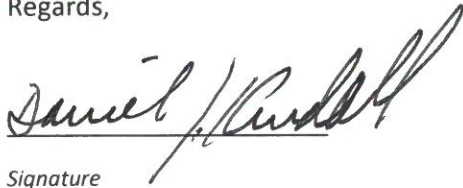
We confirm that our company has received and reviewed the EVL/GADL and TSZ0001G standards for restricted and prohibited use of substances of environmental concern.

The key raw material suppliers of ABC<sup>®</sup>Metals have attested to full compliance of the above mentioned standards. ABC has also performed audits and 3<sup>rd</sup> party testing, using accredited laboratories to test our key alloys and products for the presence of any listed substance of concern compounds and elements. ABC<sup>®</sup>Metals verified that our products are in full compliance to the reference standards, being measurably absent of or less than the detection limits, for any of the SoC elements. See laboratory test report and data on Toyota FORM 2 11-2 SoC ESS which is posted on our website, and available to any individual or company wanting to have a copy of these compliance tests.

ABC<sup>®</sup>Metals is a registered user with the International Material Data System (IMDS), and is able to provide such information upon request.

If you have any questions or comments, please do not hesitate to contact an ABC Metals representative at the phone number listed above.

Regards,



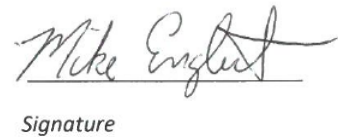
Signature

**Dan Kendall**  
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Signature

**Dee Butz**  
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Signature

**Mike Englert**  
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ABC Metals and HTI Inc.  
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SoC COMPLIANCE EVIDENCE SUMMARY SHEET (ESS)

SUPPLIER APPROVAL SIGNATURES

Delivery Part Information					APPROVER			APPROVER			ORIGNATOR	
Vehicle Code	Delivery Part No.	Delivery Part Name	Delivery Part Supplier Name	Supplier Code	Sign / Date	4/19/2016	4/19/2016	4/19/2016	4/19/2016	4/19/2016	4/19/2016	
					Name / Title	Dan Kendall / President	Mike Englert / Director of Environmental and Facilities	Dee Butz / Director of Quality	*Please reference TSZ0001G to obtain allowable limits.			

Sub-Component Part Name	Sub-Component Part No.	Supplier Name	Basis for SoC Judgment																				Judgment
			Pb		Cd		Hg		Cr+6		PBDE		PBB		Asbestos		Deca-BDE		HBCD		PFOS		
			Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	Method	Result	
C500 Series Tin Bronze Alloy Sheet/Strip/Plate	C500 Series Tin Bronze Alloy Sheet/Strip/Plate	ABC Metals Inc.	1	< 14 ppm	1	< 3 ppm	2	< 1 ppm	1	127 ppm	3	N/A	3	N/A	3	N/A	3	N/A	3	N/A	3	N/A	See Attached
		<b>RoHS Limit:</b>		<b>1000 ppm</b>		<b>1000 ppm</b>		<b>100 ppm</b>		<b>1000** ppm</b>		<b>1000 ppm</b>		<b>1000 ppm</b>									
Method #	Machine																						
1	Atomic Absorption Spectrometer																						
2	Cold Vapor Atomic Absorption																						
3	N/A																						

\*\*The analysis performed on these samples detected total chromium and was not specific to hexavalent chromium (Cr+6). Total chromium would include chromium in a non-oxidized state (Cr+3) in addition to Cr+6. Therefore, Cr+6 in the materials, if any, could never exceed the total chromium content.



SCIENTIFIC CONTROL LABORATORIES, INC.  
TESTING • CONSULTING

Mr. Brennan Perez  
ABC Metals  
500 West Clinton  
Logansport, IN 46947

**Lab No.:** 2016-030482A  
**Inception:** March 29, 2016  
**Report Date:** April 11, 2016  
**Amended:** April 21, 2016

**PO No.:** LP001978  
**Project:** Compositional Analysis (RoHS).

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### **Sample(s) Received:**

Eight (8) sections of metallic strip identified in the results section on page 2.

### **Procedure:**

Approximately 1 gram was sectioned from each sample. The sections were digested in trace metal grade acid(s) then diluted to 50 ml times using ASTM Type 1 purified water. For lead, cadmium and chromium the prepared solutions were diluted an additional 10 times then analyzed via atomic absorption (AA) per a modified SM3111B procedure. For mercury, the prepared solutions were diluted an additional 7 times then analyzed per EPA 245.1.

### **Requirements:**

Lead 0.1% by weight (1000 ppm)

Mercury 0.1% by weight (1000 ppm)

Cadmium 0.01% by weight (100 ppm)

Hexavalent Chromium 0.1% by weight (1000 ppm)

**Note:** It is our policy to keep copies of reports for seven years. The data is kept on file for up to seven years. Samples (if applicable) are kept for three weeks. Samples that are hazardous will be returned to the client. If this policy poses a difficulty, please contact us to make other arrangements. If reproduced, our report must be reproduced completely. Any unauthorized alteration of this report invalidates the content.

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## Results:

It should be noted that in the table below any result listed as less than (<) were below the limits of detection for the analysis performed.

Sample	Compositional Results in ppm			
	Pb	Hg	Cd	Total Cr*
C102 High-Copper	212	<0.364	<4.73	<104
C260 Brass	57.4	<0.342	<4.45	<97.8
G1008 Cold Rolled Low Carbon Steel	<15.5	<0.298	5.42	277
C7025 Copper Nickel	<14.3	<0.560	<3.59	<78.9
C110 High-Copper	15.2	<0.259	<3.37	<74.1
C519 Phosphor Bronze	<13.6	<0.261	<3.39	127
C655 Silicon Bronze	<15.4	0.565	<3.84	250
C425 Tin Brass	<17.3	<0.333	<4.32	<95.1
<b>RoHS Limit</b>	1000	1000	100	1000**

\*The analysis performed on these samples detected total chromium and was not specific to hexavalent chromium (Cr<sup>+6</sup>). Total chromium would include chromium in a non-oxidized state (Cr<sup>+0</sup>) in addition to Cr<sup>+6</sup>. Therefore, Cr<sup>+6</sup> in the materials, if any, could never exceed the total chromium content.

\*\*The RoHS limit is for hexavalent chromium (Cr<sup>+6</sup>) not total chromium.

## Disposition:

All samples conform to RoHS limits for lead, mercury, cadmium and hexavalent chromium.

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### Additional Comments:

While no testing was conducted for asbestos, PBB, PBDE, Deca-BDE, HBCD or PFOS it would be highly unlikely for any to be present within the materials. PBB, PBDE, Deca-BDE, HBCD and PFOS are organic compounds used as flame retardants or surfactants (PFOS). These compounds have boiling points well below the melt temperatures of the alloys tested and would have been evolved or decomposed when the alloys were in a molten state. Similarly, asbestos is decomposed at temperatures between 1832-2282° F (1000-1250° C). For comparison purposes the melting point of pure copper is 1984° F (1085° C).

Respectfully Submitted,  
Scientific Control Laboratories, Inc.



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Christopher Catalina  
Metallurgical Services, Ext. 41  
ccatalina@sclweb.com

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