



Part Submission Warrant

Part Name TERMINAL WIRE SNAP ON FEMALE (2.80mm APEX TERMINAL) Cust. Part Number F8VB-14474-BA
Shown on Drawing No. F8VB-14474-AA Org. Part Number 54001839
Engineering Drawing Change Level (PCL) AB1 (AB1) Dated 11/20/2009
Additional Engineering Changes NA Dated NA
Safety and/or Government Regulation ☐ Yes ☒ No Purchase Order No. NA Weight (kg) 0.00098
Checking Aid No. NA Checking Aid Engineering Change Level NA Dated NA

ORGANIZATION MANUFACTURING INFORMATION

FCI - MVL 793657490

Supplier Name & Supplier/Vendor Code

11823 Lenape Drive

Street Address

Mt. Union, PA 17066 USA

City

Region

Postal Code

Country

CUSTOMER SUBMITTAL INFORMATION

TTI

Customer Name/Division

Buyer/Buyer Code

Various

Application

MATERIALS REPORTING

Has customer-required Substance of Concern information been reported? ☐ Yes ☐ No ☒ N/A
Submitted by IMDS or other customer format: na

Are polymeric parts identified with appropriate ISO marking codes? ☐ Yes ☐ No ☒ N/A

REASON FOR SUBMISSION (Check at least one)

- ☒ Initial Submission ☐ Change to Optional Construction or Material
☐ Engineering Change(s) ☐ Supplier or Material Source Change
☐ Tooling: Transfer, Replacement, Refurbishment, or additional ☐ Change in Part Processing
☐ Correction of Discrepancy ☐ Parts Produced at Additional Location
☐ Tooling Inactive > than 1 year ☒ Other - please specify
Annual Validation

REQUESTED SUBMISSION LEVEL (Check One)

- ☒ Level 1 - Warrant only (and for designated appearance items, an Appearance Approval Report) submitted to customer.
☐ Level 2 - Warrant with product samples and limited supporting data submitted to customer.
☐ Level 3 - Warrant with product samples and complete supporting data submitted to customer.
☐ Level 4 - Warrant and other requirements as defined by customer.
☐ Level 5 - Warrant with product samples and complete supporting data reviewed at organization's manufacturing location.

SUBMISSION RESULTS

The results for ☒ dimensional measurements ☒ material and functional tests ☐ appearance criteria ☒ statistical process package
These results meet all design record requirements: ☒ Yes ☐ No (If "NO" - Explanation Required)

Mold/ Cavity/ Production Process D-471G / Stamping

DECLARATION

Regrind % ☒ N/A

I affirm that the samples represented by this warrant are representative of our parts which were made by a process that meets all
Production Part Approval Process Manual 4th Edition Requirements. I further affirm these samples were produced at the
production rate of 211,221 / 8 hours. I also certify that documented evidence of such compliance is on file and available for review.
I have noted any deviations from this declaration below.

EXPLANATION/COMMENTS: ANNUAL VALIDATION PRIOR TO TOOL MOVE TO BRAZIL--DCL UPDATE--NO PHYSICAL CHANGE TO THIS PARTIs each Customer Tool property tagged and numbered? ☐ Yes ☐ No ☒ N/AOrganization Authorized Signature Judith (Haskell) HoughtonDate 7/21/2010Print Name Judith (Haskell) HoughtonPhone No. (814) 582-5937Fax No. (814) 582 5885Title Quality TechnicianE-mail jhoughton@fci.com

FOR CUSTOMER USE ONLY (IF APPLICABLE)

Part Warrant Disposition: ☐ Approved ☐ Rejected ☐ Other

Customer Signature

Date

Print Name

Customer Tracking Number (optional)

Internal tracking #

CERTIFICATION REPORT

LUVATA

SOLD TO
FCI USA, INC
ACCOUNTS PAYABLE DEPARTMENT
825 OLD TRAIL ROAD
ETTERS, PA 17319

SHIP TO
FCI AUTOMOTIVE AMERICAS
11823 LENAPE DRIVE
MT. UNION, PA 17066

ENTRY - BOL
59201-365214

ALLOY
1453

PRODUCT DESCRIPTION
1.1600 .01200
H08 SN/TE COPPER STRIP *TINNED*
P/N 47129 MMC 5/29/09
ASTM B152/B152M-09 (CHEMISTRY ONLY)

QUANTITY ORDERED
PCS. 9
LBS. 14970
DATE 7/13/2011
TIME 1:05:51 PM

CUSTOMER ORDER NO.
PO 69382
GOVT CONTRACT NO.

COIL NUMBER	554178A	554658C	553910B	553910C	554572A	
COMPOSITION - %						
Copper - includes Ag	99.95	99.95	99.94	99.94	99.95	
Phosphorous	.005	.005	.006	.006	.005	
Tin	.015	.016	.019	.019	.016	
Tellurium	.0092	.01	.0117	.0117	.0107	
PROPERTIES						
Tensile Str. (ksi)	58.6	61.4	60.7	60.7	59.8	
Elongation (%) in 2 inches	2.9	3.0	2.5	2.5	2.6	
Coating Thickness (µin)	36.00	36.00	36.00	34.00	35.00	

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WE HEREBY CERTIFY that these test results were obtained from samples taken from coil(s), which were produced for the purchase order stated. These samples have been subjected to the tests called for by the customer and /or ASTM specification(s).

This product was manufactured in compliance with all applicable government and safety constraints on restricted, toxic, and hazardous materials and complies to the Restriction of Hazardous Substances Directive (RoHS) 2002/95/EC and the Consumer Product Safety Improvement Act of 2008.

Luvata Buffalo, Inc. product Material Safety Data Sheets (MSDS) provides component information for all hazardous materials in conformance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Thomas C. Pilkington

Technical Department


MATERION

BRUSH PERFORMANCE ALLOYS
606 Lamont Road, Elmhurst, IL US 60126

(Formerly known as Brush Wellman Engineered Materials)

FCI Electronics
11823 Lenape Drive
Mount Union PA 17066-9733
US

Material Certificate

Date
04/14/2011
Purchase order item/date
po69427 / 04/05/2011
Delivery item/date shipped
80518798 000010 / 04/14/2011
Order item/date
314800 000010 / 04/05/2011
Customer nbr Customer part nbr
14033 47121
Customer spec
ASTM-B-768
Rev Type Comp Class Grade

Our Material: 620000859 STRIP 17410 HT .00800 X .2200
Your Material: 47121

Materion Brush testing for chemistry composition, mechanical and physical properties were tested at our laboratory in Elmore OH. or as necessary, outside laboratories under control of the Elmore Quality Department.

This material was inspected and tested and is conforming as required in accordance with the noted part, specification, drawing and revision. The test methods for these tests are available for review by the buyer.

This is to certify that during the manufacturing process, examination, testing, and packaging, our products do not come in contact with mercury or any of its compounds nor with any mercury-containing devices employing a single boundary of containment.

Pure Hot Tin Dip Plated .00004" - .00008" per side.

Batch 0000983658 / Quantity 1,937 LBS

Characteristic	Unit	Value	Specification Lower	Limits Upper
CDA (UNS) Alloy	-	C17410		
ASTM Temper	-	TH04		
<u>Dimensional Attributes</u>				
Gauge	"	0.00800		5772
Gauge Plus	"	0.00025		
Gauge Minus	"	0.00025		5773
Width	mm	5.600		
Width Plus	mm	0.076		
Width Minus	mm	0.076		
<u>Mechanical/Physical Properties</u>				
Tensile	ksi	118.1 121.5	110.0	130.0
Yield @ 0.2% Offset	ksi	109.0 112.8	100.0	120.0
Elongation (4D)	%	11 12	7	17
Hardness Scale	-	HV		
Hardness		258	230	280
Percent IACS	%	50.6 51.3	45.0	60.0

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This transaction is entered into with Materion Brush Inc., 606 Lamont Road, Elmhurst, IL 60126

**MATERION**BRUSH PERFORMANCE ALLOYS
606 Lamont Road, Elmhurst, IL US 60126

(Formerly known as Brush Wellman Engineered Materials)

FCI Electronics
11823 Lenape Drive
Mount Union PA 17066-9733
USDelivery item/date
80518798 000010 /
04/14/2011Bend 1 Direction - LONGITUDINAL
Bend 2 Direction - TRANSVERSEChemistry Composition

Beryllium	%	0.32	
Fe+Si+Al	%	0.01 ... 0.03	
Cobalt	%	0.48	
Iron	%	< 0.01	
Silicon	%	< 0.01	
Aluminum	%	0.01	
Tin	%	< 0.01	
Zinc	%	< 0.01	
Chromium	%	< 0.01	0.01
Alloy Balance	-	COPPER	

Lot Identification

Heat Number	-	74888
Coil Number	-	SINGLE
Prod Order/Pc/Lot Nbr.	-	100570723

Quality Representative - Kevin Russell

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Inspection Dept.