



**DEFENSE LOGISTICS AGENCY**  
 DEFENSE SUPPLY CENTER, COLUMBUS  
 POST OFFICE BOX 3990  
 COLUMBUS, OH 43218-3990

IN REPLY  
 REFER TO

DSCC-VQ (VQE-04-006280 / Mr. Johnson /614-692-0631/tj)

July 2, 2004

SUBJECT: Notification of Add-On Qualification, MIL-PRF-31032, CAGE Code: 65337

Mr. Robert Hall  
 Calumet Electronics Corp.  
 25830 Depot Street  
 Calumet, MI 49913-1985

Dear Mr. Hall:

Qualification of your products is granted under the current issue of the specification as a result of successful qualification testing to Military Performance Specification MIL-PRF-31032, Printed Circuit Board/Printed Wiring Board, and associated specification MIL-PRF-31032/1 and MIL-PRF-31032/2. This qualification is based on your technical review board (TRB) review and approval of the material and classification indicated below. Your add-on qualification expanded the following capabilities.

CAPABILITIES BY TECHNOLOGY / PRINTED BOARD TYPE:		
MIL-PRF-31032/1, /2	FROM:	TO:
Base Material	GF (Woven E-glass, Epoxy resin)	GF (Woven E-glass, Epoxy resin) GI (Woven E-glass, Polyimide resin)
Hole Preparation	Chemical Etchback	FR4: Chemical Etchback Non FR4: Plasma Etchback

This listing shall appear on the next issue of Qualified Manufacturers List QML-31032. The effective date of this qualification is May 6, 2004.

MANUFACTURER NAME & ADDRESS	PLANT LOCATION	CAGE CODE: 65337
Calumet Electronics Corp. 25830 Depot Street Calumet, MI 49913-1985	Same	CONTACT: Mr. Robert Hall PHONE #: (906) 337-1305 FAX #: (906) 337-5359 EMAIL: <a href="mailto:rhall@cec-up.com">rhall@cec-up.com</a> WEBSITE: <a href="http://www.cec-up.com">www.cec-up.com</a>
CAPABILITIES BY TECHNOLOGY / ASSOCIATED SPECIFICATION:		QUALIFICATION LETTER:
MIL-PRF-31032 /1 & /2		VQE-03-004657 VQE-04-006280
Panel Size	18" X 24"	
Max. Board Thickness	0.125"	
Max/Min Hole Size	0.125" / 0.016"	
Aspect Ratio	8:01	
Max. Number of Layers	10	
Min. Conductor Width	0.006"	
Min. Conductor Spacing	0.003"	
Part Mounting	THM, SM	
Base Material	GF (Woven E-glass, Epoxy resin) GI (Woven E-glass, Polyimide resin)	
Finish System	Hot Air Solder Leveling (HASL) Au, Ni	
Hole Preparation	FR4: Chemical Etchback Non FR4: Plasma Etchback	
Copper Plating	Electrodeposited Acid Copper	

1. A listing on the Qualified Manufacturers List (QML) does not guarantee acceptance of the product(s) in any future purchase.
2. QML listing does not constitute a waiver of any requirements of the specification or of the provisions of any contract.
3. Advertising of qualification information is permitted. Permission to use such information for advertising or publicity purposes is granted provided that such publicity or advertising does not state or imply that the product(s) is the only product of that type qualified or that the Department of Defense in any way recommends or endorses the manufacturer's product.
4. The listing applies only to products produced in the plant(s) specified in this letter of notification of qualification and applies to future amendments or revisions of the specification, unless otherwise notified.
5. The listing applies only to materials and manufacturing construction techniques identical to or covered by that (those) qualified. The qualifying activity must be advised in advance of any change to the materials and manufacturing construction techniques. Failure to notify the qualifying activity of any change to the materials and manufacturing construction techniques is cause for removal from the QML.

Because we are held responsible for the accuracy and currency of this QML, please let us know if your company discontinues production utilizing these materials or processes. If you have any questions, please contact Mr. Todd Johnson, (614) 692-0626.

Sincerely,

/SIGNED/

ROBERT P. EVANS  
Chief  
Sourcing and Qualification Unit