

**Johnstown
Wire
Technologies**

124 Laurel Ave,
Johnstown, PA 15906

Phone: 814 532-5756
Fax: 814 532-5684

TEST REPORT

WORK ORDER
151603

LOT NUMBER
E-DL15101821
SALES ORDER / RLS
703750 / 001
CERT ID / REV
00037362 / 01

SOLD TO

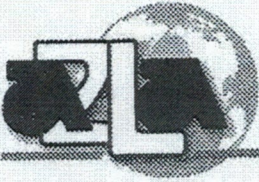
GEMCO
1019 GRIGGS ST
DANVILLE, IL 61834-0846
USA
Attn: Q.A. Dept



CUSTOMER P.O. 7822	CUSTOMER PART 0001-0102-1055	QUANTITY 1,420 LBS	COILS 1	LADING NO 00135427	SHIPMENT DATE 01/11/2016
SPECIFICATION Gemcol-4011 1008 TS 60/78000 PSI Industrial Quality Bethanized Polished Flash Coating Size: .106 +.002 -.002					
CERTIFICATION REQUIREMENTS					
Chemical					
C .06	Mn .42	P .006	S .016	Si .13	
Mechanical					
<u>TEST</u>	<u>UNITS</u>	<u>HIGH</u>	<u>LOW</u>	<u>AVERAGE</u>	
Tensile Str	Lbs/SqIn	66000	66000	66000	
Coating weight	Oz/sq ft	.23	.23	0.23	
End of Certification					

Verify that the results are a true and correct copy of the records prepared and maintained by JOHNSTOWN WIRE TECHNOLOGIES in compliance with the requirements of the cited specification. Chemistry is as reported by the rod / bar supplier and is not in JWT A2LA accreditation. This test report cannot be reproduced or distributed except in full without the written permission of JOHNSTOWN WIRE TECHNOLOGIES. The test results certified herein relate only to the items tested.

Daniel J. Malik
Daniel J. Malik, Director of Quality Assurance



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

JOHNSTOWN WIRE TECHNOLOGIES, INC.
124 Laurel Avenue
Johnstown, PA 15906

Daniel J. Mallik Phone: 814 532 5756
dmallik@johnstownwire.com

MECHANICAL

Valid To: March 31, 2016

Certificate Number: 0471.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on metals and metal alloys:

<u>Test</u>	<u>Test Method(s)</u>
Tension (room temperature \leq 120klbs)	ASTM A370, E8
Torsion	ASTM A938
Adherence of Coating (Aluminum)	ASTM A809
Adherence of Coating (Zinc)	ASTM A641
Weight of Zinc Coating	ASTM A90
Weight of Aluminum Coating	ASTM A428
Hardness - Rockwell (HRB)	ASTM E18
<u>Metallography</u>	
Preparation	ASTM E3
Microstructure	
Depth of Decarburization (Microscopic)	ASTM E1077, F2282; IFI 140
Spheroidization	ASTM F2282; IFI 140



Associated Steel Trading LLC
12187 East Cortez Drive - Scottsdale, Arizona 85259
(480) 614-9333 - Fax: (480) 445-9947
ASTCorporation@msn.com

LETTER OF CERTIFICATION

TO: GEMCO
1019 GRIGGS ST
DANVILLE, IL 61832

YOUR ORDER#: #7914

OUR CONFIRMING#: 25594

OUR INVOICE: #25594 DATED 2/3/2016

DATE SHIPPED: February 3, 2016

TYPE OF MATERIAL: 014 MIN X 1.500 (7,588#) & X 2.000 (25,866#) &
AST020310A → X 3.000 (4,156#) & X 4.500 (2,464#)
HOT DIPPED GALVANIZED *AST020316*

AST020316B
AST020316

WE DO HEREBY CERTIFY THAT THIS MATERIAL MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS:

FULL HARD RWB 85 MIN-99 MAX
ASTM A525 & A446
HOT DIPPED GALVANIZED
G60 MIN/G90 MAX COATING WEIGHT

REFERENCE/HEAT: 8672-8927-8929

CHEMICAL REQUIREMENTS: CARBON .13 MAX
MANG .60 MAX
PHOS .04 MAX
SULPHUR .05 MAX

ALL MATERIAL IS PRODUCED DOMESTICALLY IN THE UNITED STATES

SINCERELY,

IAN EPSTEIN



P.O. BOX 846
DANVILLE, IL 61834-0846

217-446-7900
FAX-217-443-2582
SALES 800-331-1164
SALES FAX-800-443-2561

Insulation Hardware - Adhesives - Stud Welding Equipment & Accessories

Perforated Insulation Hanger Testing

PULL TEST

2" x 2" GEMCO Insulation Hangers were bonded to smooth steel with "Tuff-Bond Hanger Adhesive" and developed the strengths here in listed:

1 Hour breaking strength:	2 lbs.	5 lbs.
24 Hour breaking strength:	220 lbs.	240 lbs.
48 Days breaking strength:	125 lbs.	230 lbs.
7 Days breaking strength:	280 lbs.	265 lbs.
14 Days breaking strength:	265 lbs.	220 lbs.
30 Days breaking strength:	225 lbs.	225 lbs.

All tests were made on a tensile machine with a pull rate of 2" per minute.

ACCELERATED AGING TESTS BY CONSTANT HEAT

2" X 2" GEMCO Insulation Hangers were bonded to smooth steel with "Tuff-Bond Hanger Adhesive" and Allowed to air-dry for 24 hours, then placed in an electric oven at 160 deg F.

24 Hour breaking strength:	250 lbs.	255 lbs.
48 Days breaking strength:	225 lbs.	260 lbs.
7 Days breaking strength:	55 lbs.	260 lbs.
14 Days breaking strength:	220 lbs.	175 lbs.
30 Days breaking strength:	110 lbs.	160 lbs.

All tests were made on a tensile machine with a pull rate of 2" per minute.

IMPACT SHOCK TEST

A GEMCO Hanger Support with a 2" x 2" plate was bonded to a steel plate with Tuff-Bond Hanger Adhesive" and allowed to air-dry at room temperature for 5 days. An 11" long round rod was inserted in a larger diameter hole in a 19 oz. Steel ball and the end of the rod screwed into the nut on the GEMCO Hanger Support. This Assembly was fastened into a position with the rod hanging vertically so that the ball would drop downward. The following drops indicated how many drops were necessary to shear the adhesive.

5 Days:	12 drops	8 drops
20 Days:	16 drops	16 drops