



# Material Test Report

Heat Code: 2803487

An Ameri-Forge Group Company

13770 Industrial Rd. Houston, TX 77015

ISO 9001:2000 Certified

Sales: (713) 868-4421 Fax: (713) 455-8366

PLESA ANAHUAC Y CIAS SA DE CV AV. VALLE DE LAS ALAMEDAS 66-0 54940 TULTITLAN, EDO, MEX	PO: 6649	Sales Order: 70253	Line: 24
	Item Code: 0603916100-CG21F	Qty Shipped: 5	
	Item Desc: FLG 16.00 0600 BL RF		
	Supplier: MF RINGS	Supplier Heat: 2803487	
Spec: ASTM A105/A105M-(05)/ASME SA 105/SA 105M-(08a) Section II Part A - Normalized			

Element	(%wt)	Ladle	Product	EPCRA	CAS#	Element	(%wt)	Ladle	Product	EPCRA	CAS#
C	Carbon	0.23				Ni	Nickel	0.01		✓	7440-02-0
Mn	Manganese	0.94		✓	7439-96-5	Cr	Chromium	0.11		✓	7440-47-3
P	Phosphorous	0.017				Mo	Molybdenum	0.004			
S	Sulphur	0.014				V	Vanadium	0.003			
Si	Silicon	0.21				Cb	Columbium	0.006			
Cu	Copper	0.005		✓	7440-50-8	C.E.		0.41			

Mechanical Testing					Heat Treat		
Test Lab			MF RINGS		Norm. Temp. (F)		1652
Test Bar Size			SACRIFICIAL PIECE		Norm. (Hrs)		6
HBW			159 - 159		Norm. Cooling Type		ATR
Elg (%)			31.6		Norm. Location		MF RINGS
RA (%)			61.0				
Tensile Specimen Size (in)			0.498				
Tensile (ksi)			75.1				
Yield (ksi)			47.6				
Gauge Length			2				

Product compliant with NACE MR0175, latest edition and dimensions to ANSI B16.5  
 No Weld repair performed. Chemical Analysis results shown are actual. Forgings are capable of passing hydrostatic test compatible with the appropriate rating. Elongation taken from a round specimen. All material supplied under this order is certified to be free of mercury contamination and no mercury bearing equipment was used in manufacturing, fabrication or testing. Yield strength was determined using the 0.2% offset method.

EPCRA Supplier Notification: This product may contain one or more toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act (Title III of the Superfund Amendments and Reauthorization Act of 1986) and 40 C.F.R. Part 372. Potentially reportable chemicals are indicated with a checkmark in the "EPCRA" column and a Chemical Abstract Services (CAS) registry number is provided for each such chemical in addition to the percent by weight of the chemical present in this product. It is your responsibility alone to determine whether your facility is required to submit a Toxic Release Inventory Report under EPCRA Section 313.

Certification No.: 168395  
 Certification Date: 7/10/2009

*Nicholas Tepovich*  
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 Nicholas Tepovich - Metallurgic Lab Manager