

NOTICE OF SHIPMENT/
PACKING LIST



CERTIFICATE OF TEST

AL 6168-4 1211

CUST. ORD. NO. & DATE 2DE-1009-KD	CUST. CODE 01/16/13 873376	ACCEPTING MILL LOUISVILLE, OH	SHIPPER NO. 585677	PRODUCT CODE 13020116060000	MILL ORDER NUMBER 32-013-106	DATE SHIPPED 07/09/13
FORMS DISTRIBUTION	REPEAT ORDER 96344-3	DO RATE 21	PRI-ORITY	MATL 6140	SHIPPING LOCATION LOUISVILLE OH	INVOICE 246465
SOLD TO 1	SHIP TO	PRIME SEC. DSO DSO 402	GOVT CONTRACT			

GRADE AND SPECIFICATIONS
 ATI GRADE 4 TITANIUM SHEET C R COILS ANNEALED 1BA FIN 3 EDGE (MIL-T-9046J & AM 2-CANC 09/17/99) (AMS-T-9046B CP-1 - CANC 05/2006) (AMS 4901S) (11/17/00 EXCEPT TO MIL-T-9046J) (S-1000 DATED 11/01/2012) (S-400 DTD 10/10/2011) (ASTM-F-67-06) (ISO 5832-2:1999E) (DMS 2442 REV E) (RR9000:SABRE) (DMS 1536 REV L) (07/13/11 CLARIFICATIONS DMS 1536) (ES0438-HAS REV B) (09/29/10 EXCEPTIONS TO ES0438) (ASTM-B-265-11)

CARRIER - CUSTOMER TRUCK (ECHO LOGISTICS)

ITEM	PCS	DIMENSIONS W/G/L	HEAT #	COIL #	TEST #	GROSS	TARE	NET	THEO	TAG #/	CD	SKID #
001A	1	36./025/1280.	N95NEM	03421T143CBA	L259136	2380	40	2340	2283	217941		
C CUST IDENTITY SYNTHESGRADE4SHEET												
1 SKID												

TYPE HEAT/TEST	---C---	---TI---	---N---	---FE---	---O---	R-EACH	R-TOTL
FINAL N95NEM	TOP .005	BAL .003	.20	.29	< .1000	< .3000	
	BOT .01	BAL .005	.19	.27	< .1000	< .3000	
TEST LOCATION	RW	RW	RW	RW	XX	XX	

ITEM TEST NO	YIELD PSI *	TENSILE PSI	% ELONG IN 2"	% R/A	HARDNESS	BEND	ALPHA CASE	GRAIN SIZE	H2 CHECK
001A L259136	L 71500.	94000.	27.				PASS		.0026
	L 76000.	97000.	26.				PASS		.0027
TEST LOCATION	TC	TC	TC				TC		TC

MELT METHOD - ELECTRON BEAM TEST NO L259136
 * Y.S. BY 0.2% OFFSET METHOD

ITEM TEST NO	YIELD PSI *	TENSILE PSI	TRAN ELONG IN 2 INCH	BEND BOTTOM	BEND	BEND BOTTOM	BEND
001A L259136	T 85000.	98500.	29.	L PASS	L PASS	T PASS	T PASS
	T 81000.	99500.	27.	L PASS	L PASS	T PASS	T PASS
TEST LOCATION	TC	TC	TC	TC	TC	TC	TC

PAGE 01 - CONTINUED ON PAGE 02

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Material Safety Data Sheets for this product have been supplied to your Purchasing Department. For an additional copy phone 724-226-5980. CAUTION: Processing that makes fumes, dust, or solutions may cause lung disease. See Material Safety Data Sheets for further information.

WARNING

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Stephen Wolff
 Director, Corporate Quality Assurance

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FORMS DISTRIBUTION	REPEAT ORDER 96344-3	DO RATE 21	GOVT CONTRACT	MATL 6140	SHIPPING LOCATION LOUISVILLE OH	INVOICE 246465
SOLD TO	PRIME DSO	SEC. DSO				
SHIP TO						
SPEC						

GRADE
ATI GRADE 4 TITANIUM SHEET C R COILS ANNEALED 1BA FIN 3 EDGE

CARRIER - CUSTOMER TRUCK (ECHO LOGISTICS)

ITEM TEST NO	TRAN ELEV	AMS ELEV.	MELT	PREDOMINAT	AVERAGE	PROFIL-RA
001A L259136	TEMP .2%YS	TEMP YIELD	SOURCE	GRAIN SIZE	GRAIN SIZE	T MICRO-IN
	*36200.	*28500.	1.	8.	8.5	15/15.
	*35000.	*29500.		8.	8.5	15/10.
TEST LOCATION	WM	WM		TC	TC	TC
METALLOGRAPHIC MAGNIFICATION:	100X	ETCHANT USED:	KROLLS ETCH			

GRADE VERIFICATION WAS CARRIED OUT SPECTROSCOPICALLY

DIN EN 10204:2005 - 3.1 CERTIFICATE DOES NOT INDICATE PED APPROVAL FOR THIS MATERIAL.

Heat numbers beginning or ending in EM were melted in Richland, WA.
Heat numbers beginning or ending in WC were melted in Albany, OR.

ATI ALLEGHENY LUDLUM DOES NOT USE MERCURY IN THE TESTING OR PRODUCTION OF ITS PRODUCTS.

MATERIAL MELTED AND ROLLED IN THE UNITED STATES AND COMPLIES WITH DFARS, SECTION 252.225-7008.

THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED EXCEPT IN FULL. MATERIAL MELT AND CHEMICAL TESTING WERE PERFORMED BY AN OUTSIDE ATI AL APPROVED SUPPLIER.

ATI ALLEGHENY LUDLUM WORKS TO THE ROLLS ROYCE SABRE QUALITY MANAGEMENT SYSTEM.

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CERTIFICATE OF TEST

AL 6165 4 1211

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FORMS DISTRIBUTION SOLO TO → 1 SHIP TO → SPEC →		REPEAT ORDER 96344-3	DO STATE 21	GOVT CONTRACT	MATL. 6140	SHIPPING LOCATION LOUISVILLE	INVOICE 246465
		PRIME SEC. DSO 402					

GRADE
ATI GRADE 4 TITANIUM SHEET C R COILS ANNEALED 1BA FIN 3 EDGE

CARRIER - CUSTOMER TRUCK (ECHO LOGISTICS)

ATI ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES:
 C, S BY COMBUSTION/INFRARED
 N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY
 MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF
 B BY OES
 AL AND TI (>=0.10%) BY WDXRF, OTHERWISE BY OES
 PB, BI, AG BY GFAA

MILITARY STANDARD MIL-T-9046 WAS CANCELLED 09/17/99 AND AMS-T-9046 WAS CANCELLED IN MAY 2006.
 THE SPECS HAVE BEEN REPLACED BY SEVERAL AMS STANDARDS.

MATERIAL TESTED AT ATI ALLEGHENY LUDLUM GEAE S400 APPROVED FACILITIES (T1225 & T9317):
 NATRONA HEIGHTS, PA TECHNICAL CENTER; BRACKENRIDGE, PA AND NEW BEDFORD, MA.

ATI ALLEGHENY LUDLUM HOLDS SEVERAL QUALITY AND LABORATORY CERTIFICATIONS THAT INCLUDE ISO-9001, AS9100,
 AD 2000-MERKBLATT WO, EU PRESSURE EQUIPMENT DIRECTIVE 97/23/EC, NADCAP, ISO/EIC 17025, GEAE S400,
 GEAE S-1000. REFER TO WWW.ALLEGHENYLUDLUM.COM TO ACCESS THE CURRENT ATI AL QUALITY CERTIFICATIONS.

PRODUCT WAS ANNEALED BY HEATING TO A TEMPERATURE WITHIN THE RANGE 1200 TO 1500 F (649 TO 816C), HOLDING
 AT THE SELECTED TEMPERATURE (+/- 25F OR 14C) FOR A TIME COMMENSURATE WITH THE THICKNESS AND THE
 HEATING PROCEDURE USED, AND COOLING AS REQUIRED.

THE NUMERIC CODES SHOWN UNDER MELT SOURCE CAN BE INTERPRETED AS FOLLOWS:
 1. - MATERIAL MELTED, ROLLED AND TESTED IN THE UNITED STATES.
 2. - FOREIGN MELT; ROLLED AND TESTED IN THE UNITED STATES.

PAGE 03 CONTINUED ON PAGE 04

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GRADE CARRIER - CUSTOMER TRUCK (ECHO LOGISTICS)
ATI GRADE 4 TITANIUM SHEET C R COILS ANNEALED 1BA FIN 3 EDGE

TESTING WAS PERFORMED AT THE FOLLOWING LOCATIONS:
 RW = ATI-RICHLAND; 3101 KINGSGATE WAY; RICHLAND, WA. 99354
 TC = ATI-ALLEGHENY LUDLUM; 1300 PACIFIC AVENUE; NATRONA HEIGHTS, PA 15065
 WM = WESTMORELAND MECHANICAL TESTING; 221 WESTMORELAND DRIVE; YOUNGSTOWN, PA 15696
 XX = CALCULATED

<<<<<<<< FOR ACCESS TO ONLINE CERTIFICATES OF TEST >>>>>>>>
 <<<<<<<< REGISTER AT WWW.ALCEXTRA.COM >>>>>>>>

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