



AMASTEEL DIVISION

915 TABOR STREET  
ADRIAN, MI 49221

PRODUCT CERTIFICATION REPORT

SEPTEMBER 12, 2025 Date	A25-236 Certification No.	SO00125009396 Ervin Order No.
UKERA LAB INC. Customer	SPN009 P.O. No.	9-12-25000 B Shipping Date
Attention	Release No.	109583 Customer No.
13838 BENTLEY PLACE, UNIT A Address		S-110 MIL/ASR 110 Product shipped
CERRITOS City	CA State	90703 Postal code
		USA Country
S0110-Q-DW-1191 Product Code	8.000 TONS Quantity Shipped	OK 25 09 11 Manufacturing Date (lot#)

Specification(s) Certified to (including revision date or code): AMS2431/1G, AMS2431E, AMS-S-13165A, MIL-S-13165C, J827 OCT 19

CERTIFICATION TEST RESULTS:

SIEVE ANALYSIS			Cumulative % Retained	
MM	Inches	Specification	Sample 1	Sample 2
.500	.0197	0% MAX	0	0
.425	.0165	2% MAX	0	0
.355	.0139	50% MAX	23	19
.300	.0117	90% MIN	98	98
.180	.0070	98% MIN	100	100

HARDNESS		
RC - Converted from	500	Grams
	KNOOP	Hardness Number
Specification	45-52	HRC - 90% min
# of readings	20	
Average	48	HRC
Range	45-51	HRC

CHEMICAL ANALYSIS		Percent %		MISCELLANEOUS TESTS		
Element	Specification	Sample 1	Sample 2	Characteristic	Specification	Results
Carbon	0.80-1.20	1.02	1.01	Marginal Particles AMS 2431	14 max per .0625 SQ. IN.	8
Manganese				Unacceptable Particles AMS 2431	5 max per .0625 SQ. IN.	0
230 and up	0.60-1.20			Deformed Particles MIL-S-13165	32 max per 1/4"x1/4" IN SQ	8
170-190	0.50-1.20					
70-130	0.35-1.20	.48	.48	Internal Defects	15% Max	Less Than 15%
Silicon AMS2431	0.40-1.50	.46	.47	Cracks	10% Max	Less Than 10%
Silicon J827	0.40 Min.	.46	.47	Hollows	10% Max	Less Than 10%
Sulfur	0.05 Max	.021	.018	Shrinkage	10% Max	Less Than 10%
Phosphorous	0.05 Max	.022	.020	Density	7.0 gr/ml Min.	7.69 7.69
Microstructure: Uniform tempered martensite with fine, well-distributed carbides.						

COMMENTS: Reference # 250624

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Signature: Jared B. Duckett  
 Jared B. Duckett  
 Revised 5/19/20

Title: LABORATORY SUPERVISOR

C43-1A1

**AMASTEEL DIVISION**

915 Tabor Street  
Adrian, MI 49221



1. This report is confidential and proprietary information for the customer requiring this report.
2. This report will not be copied and/or distributed outside of Ervin without written consent of the customer.
3. The following applicable test procedures were used to generate the data included in this report:

**SAE International:**

SAE J442 - 2022-05	Test Strip Holder and Gage for Shot Peening
SAE J443 - 2017-08	Procedures for Using Standard Shot Peening Test Strip
SAE J444 - 2023-06	Cast Shot and Grit Size Specifications for Peening and Cleaning
SAE J445 - 2022-05	Metallic Shot and Grit Mechanical Testing
SAE J827 - 2019-10	Cast Steel shot
SAE J1993 - 2019-02	Cast Steel Grit
SAE AMS 2431E	Peening Media General Requirements
SAE AMS 2431/1G	Cast Steel Shot, Regular Hardness (45-52 HRC)
SAE AMS 2431/2G	Cast Steel Shot, High Hardness (55-62 HRC)

**ASTM:**

B 215 - 20	Standard Practices for Sampling Finished lots of Metal Powders
D 512-23	Standard Test Method for Chloride Ion in Water
D 4940-15(2020)	Standard Test Method for Conductimetric Ionic Contamination of Blasting Abrasives
E 11 - 24	Specification for Wire-Cloth Sieves for Testing Purposes
E 140 - 12B(2019)e1	Hardness Conversion Tables for Metals (Relationship Between Brinell Hardness, Vickers Hardness, Rockwell Hardness, Rockwell Superficial Hardness and Knoop Hardness)
E 305 - 21	Standard practice for Establishing and Controlling Spectrochemical Analytical Curves
E 384 - 22	Test methods for Microhardness of Materials
E 406 - 19	Standard Practice for Using Controlled Atmospheres in Spectrochemical Analysis
E 415 - 21	Standard Test Method for Optical Emission Vacuum Spectrometric Analysis of Carbon and Low Alloy steel
E 1010 - 16	Standard Practice for Preparation of Disk Specimens of Steel and Iron for Spectrochemical Analysis by Remelting
E 1257 - 16	Standard Guide for Evaluating Materials Used for Surface Preparation in Spectrochemical Analysis

**Ervin Industries, Inc., Quality Instructions:**

Q. I. No. - AL & BL-5	Durability Test
Q. I. No. - AL & BL-43	Transmitted Energy Test