



SURFACE VEHICLE RECOMMENDED PRACTICE

J827™

OCT2019

Issued 1962-06
Reaffirmed 2013-10
Revised 2019-10

Superseding J827 OCT2013

High-Carbon Cast-Steel Shot

RATIONALE

Revision to size classification.

1. SCOPE

This SAE Recommended Practice describes chemical composition and physical characteristic requirements for high-carbon cast-steel shot to be used for shot peening or blast cleaning operations.

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

SAE J444 Cast Shot and Grit Size Specifications for Peening and Cleaning

SAE J445 Metallic Shot and Grit Mechanical Testing

2.1.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM B215, Method B Methods of Sampling Finished Lots of Metal Powders

ASTM E140 Hardness Conversion Tables for Metals (Relationship Between Brinell Hardness, Vickers Hardness, Rockwell Hardness, Rockwell Superficial Hardness, and Knoop Hardness)

ASTM E384 Test Method for Microhardness of Materials

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2.2 Related Publications

The following publications are provided for information purposes only and are not a required part of this SAE Technical Report.

2.2.1 ISO Publications

Copies of these documents are available online at <http://webstore.ansi.org/>.

ISO 11124 Part 3	High-Carbon Cast-Sheet Steel Shot and Grit
ISO 11125 Part 1	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 1: Sampling
ISO 11125 Part 2	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 2: Determination of Particle Size Distribution
ISO 11125 Part 3	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 3: Determination of Hardness
ISO 11125 Part 4	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 4: Determination of Apparent Density
ISO 11125 Part 5	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 5: Determination of Percentage Defective Particles and Microstructure
ISO 11125 Part 6	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 6: Determination of Foreign Matter
ISO 11125 Part 7	Preparation of Steel Substrates Before Application of Paints and Related Products - Test Methods for Metallic Abrasives - Part 7: Determination of Moisture

3. DESCRIPTION

High-carbon cast-steel shot is obtained by atomizing molten steel. The shot is heat treated and screened to produce a range of sizes from HCS S70 to HCS S1320 or larger, as described in SAE J444. Other sizes are available.

4. SIZE CLASSIFICATION

Cast-steel shot shall be identified by HCS S for shot, followed by three numbers representing the size in ten thousandths of inches, in accordance with SAE J444.

EXAMPLE: HCS S330 indicates a cast-steel shot identified by a nominal sieve opening of 0.850 mm (0.0331 inch).

5. CHEMICAL COMPOSITION

The finished shot shall have the chemical composition shown in Table 1: