

SSPC: The Society for Protective Coatings

ABRASIVE STANDARD NO. 2

Cleanliness of Recycled Ferrous Metallic Abrasives

1. Scope

1.1 This standard contains requirements for the cleanliness of recycled ferrous metallic blast cleaning abrasives (the “work mix”) used for the removal of coatings, paints, scale, rust and other foreign matter from steel or other surfaces. Laboratory and field testing procedures to determine conformance to the requirements of the standard are also included.

2. Description

2.1 **FERROUS METALLIC ABRASIVES:** Ferrous metallic abrasives are used for blast cleaning steel and other surfaces in field and shop locations. The inherent value of ferrous metallic abrasives is their ability to be recycled many times. The recycled abrasive must be cleaned to remove abrasive fines and debris, including paint, rust, mill scale, and other contaminants generated during the blast cleaning of steel or other surfaces.

2.2 **RECYCLED ABRASIVE WORK MIX:** The work mix develops during blast cleaning and recycling and is composed of new media and, recycled clean media that meets the requirements of Sections 4.1 through 4.6 of this standard. The new abrasive being added may consist of shot, grit, or a mix of shot and grit.

3. Referenced Standards

3.1 The latest issue, revision, or amendment of the referenced standards in effect on the date of invitation to bid shall govern, unless otherwise specified.

3.1.1 If there is a conflict between the requirements of any of the cited referenced standards and this standard, the requirements of this standard shall prevail.

3.2 SSPC: THE SOCIETY FOR PROTECTIVE COATINGS STANDARD

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| PA 17 | Procedure for Determining Conformance to Steel Profile/Surface Roughness/ Peak Count Requirements |
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3.3 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS:¹

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| D3335 | Test Method for Low Concentrations of Lead, Cadmium and Cobalt in Paint by Atomic Absorption Spectroscopy |
| D4940 | Test Method for Conductimetric Analysis of Water Soluble Ionic Contaminants of Blasting Abrasives |
| D7393 | Standard Practice for Indicating Oil in Abrasives |

4. Requirements for Recycled Work Mix Abrasives

4.1 Unless otherwise specified, the recycled work mix shall meet the requirements of Sections 4.2 through 4.6 prior to first use at each jobsite. The work mix shall meet the requirements of Sections 4.4, 4.5, and 4.6 when tested thereafter at 12-hour intervals or once per work shift, whichever is shorter. Nonconforming work mix shall not be used, shall be removed from equipment and shall be disposed of in accordance with federal, state, and local regulations and project specification requirements (see Notes 6.1, 6.2 and 6.3).

4.2 The abrasive material as supplied shall comply with all applicable Federal, state/provincial and local regulations. Material Safety Data Sheets shall be furnished for all abrasive materials supplied (see Note 6.4).

4.3 **LEAD CONTENT:** The maximum lead content of the work mix shall be 0.1% by weight (1000 parts per million [ppm]). Collect a single random sample of approximately 115 grams [g] (1/4 pound [lb]) of the work mix for testing according to requirements of ASTM D3335.

4.4 **WATER-SOLUBLE CONTAMINANTS:** A single random sample of approximately 300 milliliters (10 fluid ounces) of cleaned work mix shall be tested for conductivity in accordance with ASTM D4940. The conductivity of the abrasive work mix shall not exceed 1000 micromhos/cm (1 mho = 1 siemen). The test shall be performed once every 12 hours or once every work shift, whichever period is shorter (see Notes 6.2 and 6.3).

¹ ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.