

RULE 1140

Abrasive Blasting

(a) Definitions

For the purpose of this rule the following definitions shall apply:

- (1) Abrasive is any material used in an abrasive blasting operation including but not limited to sand, slag, steel shot, garnet or walnut shells.
- (2) Abrasive Blasting is the cleaning or preparing of a surface by forcibly propelling a stream of abrasive material against the surface.
- (3) Abrasive Blasting Equipment is any equipment used in abrasive blasting operations.
- (4) Brushoff Blasting is a method of cleanup performed in order to achieve surface uniformity or impurity removal after wet blasting, hydroblasting, or vacuum blasting operations.
- (5) Confined Blasting is any abrasive blasting conducted in an enclosure which significantly restricts air contaminants from being emitted to the ambient atmosphere, including but not limited to shrouding, tanks, drydock, buildings, structures.
- (6) Facility is any property site at which one or more abrasive blasting operations, either confined or unconfined, are carried out or maintained as part of an identifiable business.
- (7) Hydroblasting is any abrasive blasting using high pressure liquid as the propelling force.
- (8) Multiple Nozzle describes more than one nozzle being used to abrasive blast the same surface in such close proximity that their separate plumes are indistinguishable.
- (9) Permanent Abrasive Blasting Operation or Equipment is any abrasive blasting operation conducted, or abrasive blasting equipment located, in a building which is used, in whole or i. part, for abrasive blasting operations.
- (10) Sandblasting is abrasive blasting.
- (11) Source is the impact surface from any single abrasive blasting nozzle.

- (12) Steel or Iron Shot/Grit are abrasives which meet either the Society of Automotive Engineers recommended practices J827 and J444 or Steel Founders' Society of American Standards 21-68 or 20T-66, as those practices and standards existed on February 24, 1984.
- (13) Unconfined Blasting is any abrasive blasting which does not conform with definitions (5) or (9) of this section.
- (14) Vacuum Blasting is any abrasive blasting in which the spent abrasive and surface material is immediately collected by a vacuum device.
- (15) Wet Abrasive Blasting is any abrasive blasting using compressed air as the propelling force, which in the judgment of the Executive Officer uses an amount of water adequate to minimize the plume.

(b) **Operating Requirements**

- (1) No person shall, if he complies with an applicable performance standard in section (b)(4), discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:
 - (A) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
 - (B) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in section (b)(1)(A).
- (2) No person shall, if he is not complying with an applicable performance standard in section (b)(4), discharge into the atmosphere from any abrasive blasting any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:
 - (A) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
 - (B) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in section (b)(2)(A).
- (3) Compliance with all provisions of this rule does not exempt any person from complying with the requirements of Rule 402, Nuisance.
- (4) Any abrasive blasting operation except as provided for in section (c)(2) shall comply with at least one of the following performance standards:
 - (A) Confined blasting shall be used;

- (B) Wet abrasive blasting shall be used;
 - (C) Hydroblasting shall be used; or
 - (D) Dry unconfined blasting shall use abrasives as defined in section (c).
- (5) Surface preparation for raised traffic delineating markers and pavement marking removal using abrasive blasting shall comply with at least one of the following performance standards:
- (A) Wet abrasive blasting, hydroblasting, or vacuum blasting shall be used;
 - (B) Dry unconfined abrasive blasting for removal or surface preparation for immediate application of pavement markings of less than 1,000 square feet or for surface preparation for raised traffic delineating markers shall use abrasives as defined in section (c)(1).
- (6) Confined abrasive blasting shall be used for all abrasive blasting operations at a facility except under the following conditions:
- (A) When steel or iron shot/grit is used.
 - (B) When the item to be abrasive blasted exceeds 8 feet in height, 8 feet in width, or 10 feet in length; or
 - (C) When the structure or surface is abrasive blasted at its permanent or ordinary location.
- (7) Abrasive blasting of stucco and concrete shall be performed by wet abrasive blasting, hydroblasting, or vacuum blasting, except dry abrasive blasting may be used for:
- (A) Window and door returns and frames.
 - (B) Eaves, overhangs, and ceilings.
 - (C) Brushoff blasting except for stucco surfaces.
 - (D) Completely shrouded structures and blast areas that control emissions.
 - (E) Abrasive cleaning operations other than aggregate exposure or paint removal related to new concrete construction or repair activity if such operations are performed onsite.

(c) Requirements for Abrasives

- (1) Except as provided in section (c)(3) all abrasives used for dry unconfined blasting shall comply with the following performance standards:
 - (A) Before blasting the abrasive shall not contain more than 1 percent by weight material passing a No. 70 U.S. Standard sieve.
 - (B) After blasting, the abrasive shall not contain more than 1.8 percent by weight material five microns or smaller.
- (2) No person shall conduct dry unconfined blasting unless the abrasive(s) used in such operation have been certified by the Air Resources Board, on at least an annual basis, to comply with the performance standards set forth in section (c)(1).
- (3) Certified abrasives reused for dry unconfined blasting are exempt from section (c)(1)(B), but must conform to section (c)(1)(A).
- (4) All manufacturers and suppliers of abrasives certified for dry unconfined abrasive blasting shall legibly and permanently label the invoice, bill of lading and abrasive packaging or container with the following information:
 - (A) The manufacturer's name or identifiable trade name.
 - (B) The grade or brand name of the abrasive.
 - (C) The statement "ARB certified for dry unconfined blasting".
- (5) A blend of certified abrasives shall be considered certified.

(d) Test Method

All abrasives used for dry unconfined blasting shall comply with the performance requirements of sections (c)(1)(A) and (c)(1)(B) when tested in accordance with "Method of Test for Abrasive Media Evaluation, Test Method No. Calif. 371-A", or other test method approved by the Executive Officer.

(e) Visible Emission Evaluation

Visible emission evaluation of abrasive blasting operations shall be conducted in accordance with the following provisions:

- (1) Emissions shall be read in opacities and recorded in percentages.
- (2) The light source should be behind the observer during daylight hours.

- (3) The light source should be behind the emission during hours of darkness.
- (4) The observer position should be at approximately right angles to wind direction and at a distance no less than twice the height of the source but not more than a quarter mile from the base of the source.
- (5) Emissions from unconfined abrasive blasting shall be read at the densest point in the plume, which point shall be at least 25 feet from the source.
- (6) Where the presence of uncombined water is the only reason for failure to comply with opacity limits, the opacity limits shall not apply. The burden of proof in establishing that opacity limits shall not apply shall be upon the operator.
- (7) Emissions from unconfined abrasive blasting employing multiple nozzles shall be evaluated as a single source unless it can be demonstrated by the operator that each nozzle, evaluated separately, meets the requirements of this rule.
- (8) Emissions from confined abrasive blasting shall be read at the densest point after the air contaminant leaves the enclosure.

(f) **Effective Dates**

The owner or operator of any abrasive blasting operation subject to this rule shall comply with the provisions of this rule on the date of adoption.

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