

Regulation D-24.0: Abrasive Blasting

- 24.1 Abrasive blasting has several Environment, Health & Safety implications and requirements that should be adhered strictly. It should be noted that no open to air blasting shall be carried out under any circumstances and such uncontrolled activities shall invite serious action from the Authority. All measures shall be taken to protect workers, land and ambient air from any contamination due to this activity.
- 24.2 Sand or any abrasive blasting media containing more than 1% free silica shall not be used in abrasive blasting operations. All abrasive blasting shall be of recyclable non-metallurgical abrasive material. No open blasting shall be carried out unless approved by EHS with requisite controls as specified by the Authority.
- 24.3 Dust from abrasive blasting must be contained at the work-site to the maximum feasible extent and should not result in off-site nuisance. Particulate emissions from extraction/ filtration systems should not exceed EHS standard of 0.1 grams/NM³.
- 24.4 Unless large items of work are involved, all blasting operations must be done in enclosed blast cleaning machines, cabinets or rooms.
- 24.5 Whenever abrasive blasting is done inside an enclosed room, this should be properly ventilated and the exhaust air from these rooms or cabinets should be vented through appropriately designed dust collectors (e.g. filter bags or similar equipment). The dust collector should be set up so that accumulated dust can be removed without generation of fugitive emissions and contaminating work areas.
- 24.6 Portable blast – cleaning equipment used in the open by industrial establishments and construction sites should be provided with appropriate enclosures such as tarpaulin, screens to prevent dust migration and reduce hazards to adjacent workers and the general public.
- 24.7 Companies using abrasives must take all practicable steps to minimize the loss of the materials to the environment, especially the ambient air, drainage and marine waters.
- 24.8 Abrasive blast cleaning of ship hulls must be off-water and shall be appropriately provided with enclosures or catchments to prevent dust migration/waste spills. Where it is necessary to blast over water, only abrasives material approved by the EHS shall be used.

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- 24.9 Appropriate abrasive blasting technology or low dust abrasives must be used to control dust in the outdoor blasting of large items of work where off site impact and nuisance is likely.
- 24.10 Appropriate "WARNING" signs shall be posted in a conspicuous place in the work areas to warn workers about the hazards and specify personal protective equipment (e.g. respirators).
- 24.11 Personnel involved in abrasive blasting must wear a blaster's helmet with impact protection cover, fresh air supply and inside collar, suits made of hard wearing material, leather gloves and safety shoes.
- 24.12 Measures must be taken to ensure that personal protective equipment are kept separately from other clothing belonging to employees, and outside the working area in special changing rooms.
- 24.13 All workers within the blasting area must wear appropriate personal protective equipment.
- 24.14 Workers should not eat, drink or use tobacco products in the blasting areas.
- 24.15 Workers should wash their hands and face before eating, drinking and smoking.
- 24.16 The employer should provide facilities for workers to take a shower before leaving the work site.
- 24.17 Workers engaged in abrasive blasting must be instructed on the health risks and on the use of appropriate personal protective equipment.
- 24.18 All workers engaged in abrasive blasting activities should be medically examined every **One year** (annually) and given a chest x-ray. A file and records of each such staff member shall be submitted to EHS annually.
- 24.19 Periodic maintenance of all equipment's associated with the abrasive blasting shall be carried out.
- 24.20 Waste abrasives exceeding the limits specified in columns II and III are hazardous wastes in Dubai and must be disposed of in accordance with the appropriate EHS/DM procedures.

I	II	III
Contaminant	Total Concentration mg/kg	Leachable Fraction(*) mg/1

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Arsenic	500	5
Lead	3000	5
Cadmium	50	0.50
Chromium	3000	5
Copper	1000	10
Nickel	1000	2
Mercury	50	0.1
Zinc	5000	50
Tin	500	
Selenium	100	

Disposal of wastes to approved reuse schemes (i.e. cement products or similar) is encouraged, subject to approval from EHS. Any abrasive blasting wastes which are non-hazardous under the above definition and which are not reused may be disposed of as an inert solid waste in Dubai.