

Hazardous Substances – **Spray painting**

08.03.03

Abrasive blasting over-spray containment >

This information bulletin has been developed to assist employers and others to outline the minimum requirements for the containment of over-spray. This should be read in conjunction with [Workplace Health and Safety Regulations 156 & 166](#).

Introduction

Workers and the general public are at risk if exposed to the over-spray of dusts, paints and other waste products generated from abrasive blasting and spray painting operations. The health effects attributable to the inhalation of over-spray can range from respiratory irritants through to chemical sensitization and cancers.

Environmental damage can also occur, in particular from waste products and residue not adequately cleaned-up and disposed of after the abrasive blasting operations. The following information forms the minimum requirements for effective control measures, where abrasive blasting is performed outside of a blasting chamber and spray painting is performed outside a spray booth.

Procedure

Abrasive blasting must be carried out in an appropriately constructed blasting chamber where practicable. Spray painting must be carried out in an approved spray paint booth where practicable.

Where blasting in a chamber or enclosure or spray painting in a booth is not possible, blasting & spray painting may be carried out using an appropriate containment system. The purpose of a containment system is to prevent or minimise the over-spray of dust and debris generated during surface preparation or paint when applying industrial coatings.

Where possible the object should be fully enclosed. Where full enclosure is not possible the following recommendations must be considered:

- Containment screens should be made of puncture and tear resistant material, hessian is not recommended. Selection should also consider fire retardancy, burst strength and ultra-violet (UV) resistance.
- Shade cloth will not prevent the escape of fine dust, and should not be used for temporary enclosures if work generates silica, lead, or other toxic dusts.

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The use of water curtains for blasting operations is effective in minimizing dust over-spray. A fine spray mist system with appropriate drainage should work satisfactorily. Water must then be controlled from entering waterways such as river systems and the harbour (contact [Department of Planning and Infrastructure](#)).

- Exclusion or buffer zones must be established to ensure others are not affected by blasting operations. Specific considerations should be given to other workers in the workplace, nearby workplaces and to the general public when blasting in public areas. Over-spray must not be allowed to travel beyond the exclusion zone limit.
- Environmental factors such as wind conditions, proximity to water-ways, harbours and ground condition should be considered before blasting operations commence. Where wind conditions affect the ability to contain over-spray, work must stop.
- Containment structures must be appropriately maintained.
- Where containment screens are used, joints should over-lap each other and be appropriately secured.
- A return at the top of the structure should be considered to ensure over-spray is re-directed downwards.
- Competent persons must carry out correct assembly of containment structures. For temporary enclosures, engineering certification may be required.

A waste management program should be implemented. This program should specifically address the clean-up and appropriate disposal method of abrasive blast waste products immediately after completion of blasting operations. Dust collectors, abrasive vacuum systems and recycling units may be used to assist in your waste management.

Other considerations should include:

- Ignition sources;
- Wind indicators;
- Warning signs & barricades;
- Drainage systems (where appropriate);
- Job rotation and breaks for workers.

If material being removed during abrasive blasting or applied by spray painting contains toxic concentrations of substances such as described in Schedule 7 of the *Workplace Health and Safety Regulations*, the employer must apply (in writing) to NT WorkSafe for an exemption.

Control Measures

Generally the employer is to conduct a formal process for hazard identification, risk assessment and risk control. This process is to include; **hazards and risks** with plant and equipment (existing & new), the competency of abrasive blasting operators and spray painters, the work being performed and location and appropriate personal protective equipment.

The **risk assessment/s are to be documented and retained** by the employer and be readily available for audit, by NT WorkSafe. These risk assessments will be progressively audited by WorkSafe to ensure that safe work procedures are being effectively implemented.

Over-spray containment checklist

The following checklist has been developed in consultation with the abrasive blasting industry as means of verifying that all considerations for containment of over-spray have been addressed. In most circumstances the checklist should be included in the company's safety plan. The checklist is to be completed by the operator prior to commencing blasting and painting operations. The completed checklist is also to be readily available on site for verification purposes by an NT WorkSafe Officer, when requested.

Job Description

Location

The following checklist is to be completed prior to blasting or spray painting. This list can be included in your safety plan.

Factors taken into account

Yes **No**

Have all hazards been identified and recorded?

Have you conducted a risk assessment of each hazard?
If yes, is it recorded?

Is full encapsulation required?

If yes, did you consider; access/egress, ventilation, lighting, wind load factors, engineering certification?

Have you established an exclusion or buffer zone?

If yes, at what distance _____metres?

Have safety signs (appropriate to the hazard) been erected?

Did you consider wind conditions?

Did you notify nearby workplaces?

Does your containment system prevent over-spray during blasting operations?

Will a water spray system be effective in containing over-spray?

If spray painting is used to apply protective coatings, is spray painting in accordance with *Workplace Health and Safety Regulations 166 (1&2)*?

Is the blast operator or spray painter aware of when operations must stop?
How?

In the event of an emergency, are adequate procedures in place?

Have you considered the affect on the environment?

Have you prevented waste material from entering the waterways?

Have you cleaned up all waste material?

Has waste material been properly disposed?

Signed: _____

Date: _____

NT WorkSafe >

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