

Fibreglassing

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Introduction

Fibreglassing for small or large jobs can have environmental impacts. Some of the materials used can be dangerous to workers. The primary hazard comes from volatile organic compounds (VOCs) given off by the resins. Some resins, catalysts and the solvents used for clean up can be flammable.

Who this applies to

- vessel operators
- slipway operators
- marina operators
- boat yard operators
- boat ramp operators
- boat and yacht club operators
- contractors

Operators must (required outcomes)

- 1 perform all fibreglass work in a shed or building with the doors closed using mechanical ventilation equipment that meets recommended standards (refer to recommended practices for options)

OR

undertake measures to control odour and dust from fibreglass works that reflect the risk of environmental harm from the activity being performed (refer to recommended practices for options).

Operators should (recommended practices)

- 2 for reinforced plastic fabrication, use a low styrene emission (LSE) resin with a styrene emission rate of not greater than 20 g/m² per 30 minutes
- 3 ensure the ventilation for the workshop is at least 10 air changes per hour
- 4 have extraction at or near floor level and arranged so the air movement occurs throughout the workshop, thereby ventilating the complete work area
- 5 filter dust from the effluent gas using a dry media filter. Fabric or cartridge filters may be used provided the discharge contains less than 100 mg of dust per m³ of exhaust air

- 6 ensure the minimum height of effluent discharge from a chimney is at least three metres above the highest building structure within a radius of 30 metres. A higher chimney may be necessary in some cases to achieve the design ground level criterion
- 7 discharge effluent gas vertically, through a chimney, at not less than 10 metres per second. Conical-type rain protectors or similar devices prevent vertical discharge, thereby inhibiting dispersion. If rain protection is required, use a suitable vertical discharge cowl
- 8 where practical, use hand lay-up methods in preference to spray gun applications as hand lay-up releases less styrene
- 9 ensure spray lay-up equipment is properly maintained and periodically cleaned. This will avoid glass jamming in the spray gun chopper mechanism and the generation of additional waste (resin and glass) when fixing it
- 10 use airless, air-assisted or high-volume low-pressure (HVLP) spray guns. Internal mix, airless spray guns result in lower styrene emissions than other types of spray guns
- 11 use a gun wash station or similar for the cleaning of spray equipment
- 12 reduce the amount of grinding and sanding as much as possible by trimming with a knife or mechanical cutter when articles have solidified but not yet hardened
- 13 package dust from sanding and grinding prior to waste disposal
- 14 consult with supplier regarding recommended disposal for under-cured resin material. Avoid disposing resins to landfill.

References

EPA, *EPA Guideline: Ventilation for fibreglass works*, www.epa.sa.gov.au/xstd_files/Air/Guideline/guide_fibreglass.pdf.

EPA, *Code of practice for vessel and facility management (marine and inland waters)*, www.epa.sa.gov.au/xstd_files/Water/Code%20of%20practice/vessels.pdf.

SafeWork SA, *SafeWork SA Safeguards: GS 8 Fibreglass Reinforced Products*, www.safework.sa.gov.au/uploaded_files/g8i.pdf.

Useful websites

EPA Vessel and facility management pages, www.epa.sa.gov.au/vfm.

Disclaimer

This publication is a guide only and does not necessarily provide adequate information in relation to every situation. This publication seeks to explain your possible obligations in a helpful and accessible way. In doing so, however, some detail may not be captured. It is important, therefore, that you seek information from the EPA itself regarding your possible obligations and, where appropriate, that you seek your own legal advice.

Further information

Legislation

Legislation may be viewed at: <www.legislation.sa.gov.au>

Copies of legislation are available for purchase from:

Service SA Government Legislation Outlet
Adelaide Service SA Centre
108 North Terrace
Adelaide SA 5000

Telephone: 13 23 24
Facsimile: (08) 8204 1909
Website: <shop.service.sa.gov.au>

For general information please contact:

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