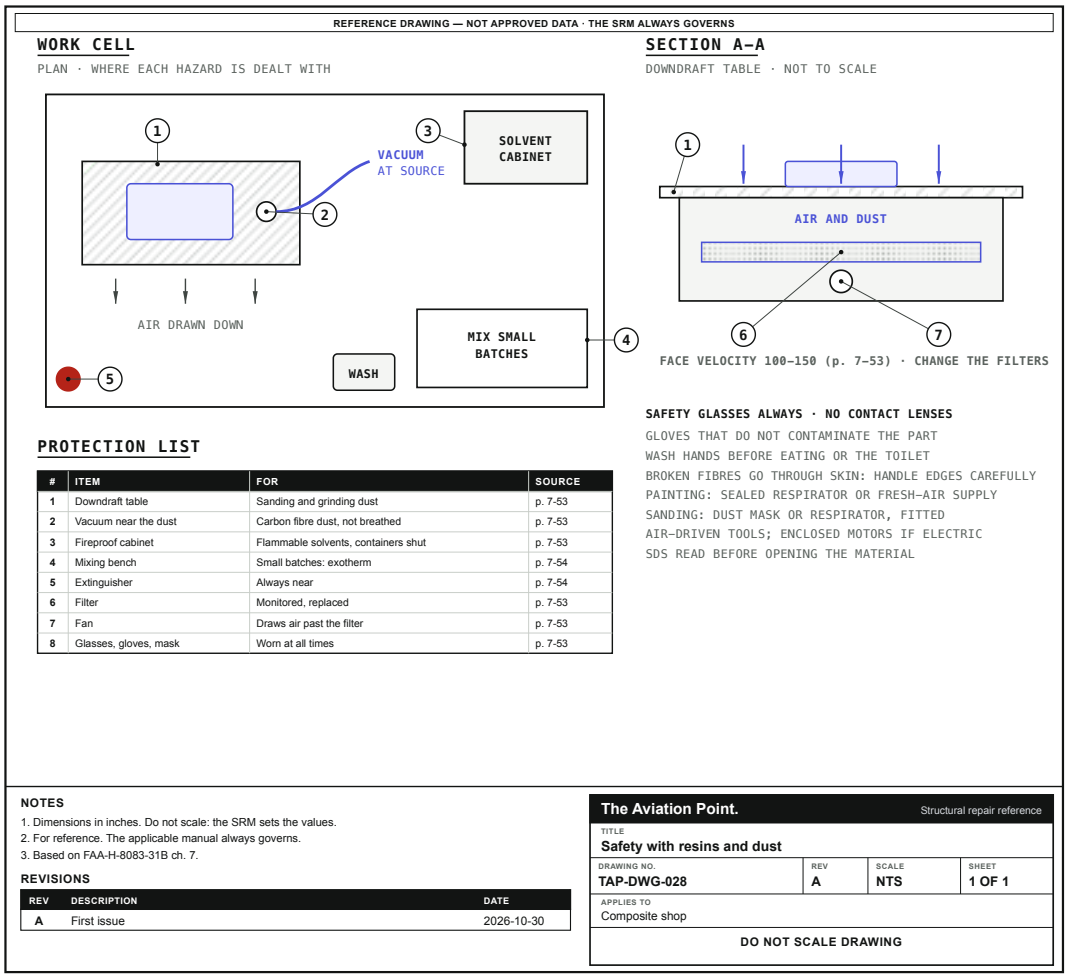
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Safety with Resins and Dust: Eyes, Lungs, Skin and Fire

Hazards and controls · the downdraft table · fire and static



Work cell, downdraft section and protection list, after FAA-H-8083-31B pp. 7-52 to 7-54. The layout is an example, not an approved shop design.

Hazard by hazard

Hazard	What the handbook asks	In the cell
Chemicals	Read and understand the safety data sheet (SDS) for every resin, solvent and adhesive; it lists hazards, and some materials irritate the lungs or are carcinogenic	SDS at the bench; read before opening
Eyes	Safety glasses at all times; face shield for mixing or pouring acids; never contact lenses, because solvents can melt them and dust gets under them	Glasses on before anything is opened
Dust	Do not breathe carbon dust; good air flow; vacuum near the source; dust mask or respirator for sanding; sealed respirator with the right filters or fresh-air supply for paint	Downdraft table and vacuum at the sander
Skin	Approved gloves that protect the skin and do not contaminate the part; wash hands before the toilet or eating; handle damaged parts with care, since single fibres penetrate and break off in the skin	Glove station, wash basin
Fire	Solvents are flammable: close containers, fireproof cabinet, away from static; air-driven tools preferred, enclosed motors if electric; do not mix too much resin, because it overheats and smokes; extinguisher near	Cabinet, small batches, extinguisher

Key points

- **Read the SDS** of every resin, solvent and adhesive before opening it.
- **Eyes:** safety glasses at all times; no contact lenses.
- **Dust:** vacuum at the source; mask or respirator for sanding; sealed respirator or fresh air for paint.
- **Downdraft table:** face velocity 100 to 150 as the handbook says (unit to confirm); filters changed on a schedule.
- **Skin:** approved gloves that do not contaminate the part; wash before eating.
- **Fire:** fireproof cabinet, closed containers, air tools, small batches, extinguisher near.
- **Dedicated tools** for composites; no waterjet on honeycomb.

Step by step

1. Read the SDS and put on glasses and gloves.
2. Vacuum or downdraft on before sanding or cutting.
3. Keep solvent in the cabinet; containers closed.
4. Mix only the batch you can lay up.
5. Handle damaged edges with care: fibres penetrate skin.
6. Wash hands before eating or the toilet.
7. Dispose of dust, filters and waste per local rules.

Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.

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SOURCES · FAA-H-8083-31B, AMT Handbook — Airframe, Volume 1, Chapter 7 · AC 43.13-1B, Change 1, Chapter 3, Fiberglass and Plastics

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