

Hazard Controls

Control of Paint Overspray in Autobody Repair Shops

From the National Institute for Occupational Safety and Health

Description of Hazard

Hazardous components of paint over spray include metals such as lead and chromium, polyisocyanates, and liquid organic solvents. Autobody workers may develop nervous disorders, skin and eye irritation, respiratory sensitization, asthma, and reduced lung function from exposure to paint.

Description of Controls

Effective control of worker exposure to paint overspray requires the proper selection of spray-painting equipment, a properly designed and ventilated spray-painting booth, and personal protective equipment. Formal training and maintenance programs will help to ensure that all equipment operates properly. Three types of control are recommended:

Spray-Painting Guns

High volume, low pressure (HVLP) spray-painting guns are recommended instead of conventional gravity or

siphon-feed spray-painting guns because HVLP guns cut paint overspray concentrations in half. HVLP guns transfer paint more efficiently and can reduce paint usage.

Paint-Booth Ventilation

Downdraft ventilation spray-painting booths are recommended instead of Crossdraft or Semi-Downdraft Ventilation spray-painting booths. Properly operated downdraft booths produce lower concentrations of paint overspray compared to the other two types. Downdraft booths produce a cleaner paint job that requires less buffing (see Figure 1).

Respiratory Protection

Properly used and maintained HVLP spray painting guns and downdraft booths will greatly reduce paint overspray concentrations, but they will not completely eliminate overspray from the air workers breathe. Therefore, personal respiratory protective equipment is also recommended and a respiratory protection program that contains all elements required by the OSHA standard (such as worker evaluation, selection of appropriate air-purifying or supplied-air res-

pirators, fit-testing, training, and maintenance) will be needed to fully protect workers from this hazard.

For More Information

For a free copy of the report Control of Paint Overspray in Autobody Repair Shops, or for information on other occupational safety and health issues, call the National Institute for Occupational Safety and Health (NIOSH) at 1-800-35-NIOSH (1-800-356-4674).

NIOSH is the federal agency responsible for conducting research and making recommendations for Preventing work-related illness and injuries. Hazard Controls are based on research studies that show reduced worker exposure to hazardous agents or activities.

Acknowledgments

The principle contributors to this Hazard Controls are William A. Heitbrink, Division of Physical Sciences and Engineering, and Jerome P. Flesch, Education and Information Division, NIOSH.

This Hazard Controls is DHHS (NIOSH) Publication No. 96-106.

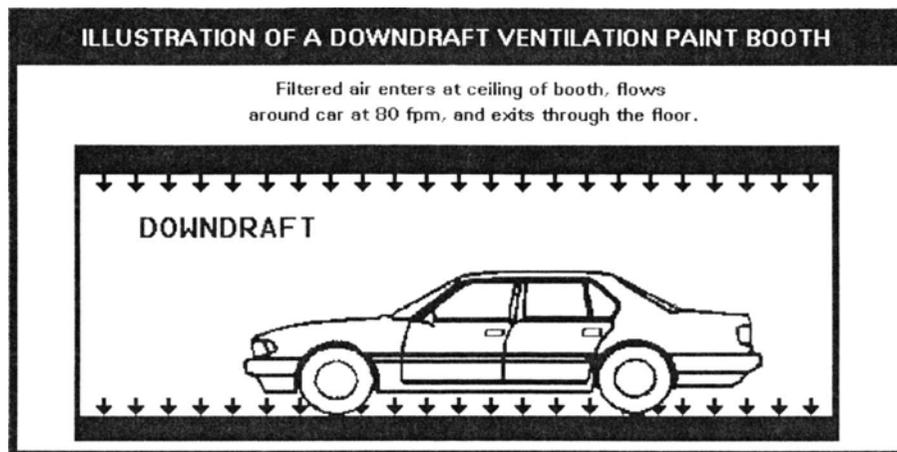


FIGURE 1



Control of Paint Overspray in Autobody Repair Shops

To cite this article: (2001) Control of Paint Overspray in Autobody Repair Shops, Applied Occupational and Environmental Hygiene, 16:8, 780-780, DOI: [10.1080/10473220118379](https://doi.org/10.1080/10473220118379)

To link to this article: <https://doi.org/10.1080/10473220118379>



Published online: 30 Nov 2010.



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