



Respirator Requirements

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Do body techs have to wear respirators? Do detailers? Does everyone who walks through the shop? (One sales rep claimed that was the case. It's not).

Who must wear a respirator is based, first, on exposures – both what is in the air and how much is in the air. That will vary from shop to shop, but because nearly all shops have similar operations, we can make some educated guesses. We're helped in this by research done by NIOSH (the National Institute of Occupational Safety and Health) and others, who've measured exposures in a number of shops.

From that research, we know people who paint or prime need to wear respiratory protection. When they spray, they can breathe in the paint mists and vapors, even if the booth is well-ventilated. The levels of individual solvents, such as xylene, are often below exposure limits. But paints and primers may contain a number of solvents with similar health effects. When those levels are added together, they can be high enough to require respirator use. Of even more concern: the isocyanates in the clear coat, which can cause asthma.

Sanding creates a lot of dust. If the paint is old, that dust may contain lead or chromium, which can cause serious long term harm. We don't see those metals used in paints today. If people are sanding off body filler, the dust will be mainly polystyrene, polyester, and talc, substances that don't have specific toxic effects. Measurements of dust levels have shown brief exposures to high levels, but levels averaged over the full work day have been below legal and recommended exposure limits. Based on that, we recommend respiratory protection against dust, but we can't say it's mandatory.

Most of detailers' work isn't dusty and doesn't involve solvents. About the only task detailers might do that causes respiratory problems is spraying wheel brightener. Some of those contain hydrofluoric acid, a very corrosive substance. (You can check the label or Safety Data Sheet for chemical contents and precautions.) Lung protection against that would be an acid gas respirator with a particulate prefilter. But a much better option is to change products, to one less likely to cause severe eye and skin burns.

So if we advise that respirator use when sanding is recommended but not mandatory, what does that mean for you? Your options: You can require anyone sanding to wear a respirator. You can tell employees that respirator use is not mandatory, but you'll provide respirators for those who choose to wear them. You can provide dust capture systems (the best option), so dust levels stay relatively low.

Keep in mind that the two-strap paper type of mask, also called an N95 filtering facepiece, is a respirator. For the dust from body filler, either that or a respirator with the magenta-colored P100 filters will do the job. Those two respirators, the paper type and the cartridge type, have

the same assigned protection factor. OSHA says that either can be worn in conditions up to ten times the exposure limits. The difference between the two: the dust mask is designed to filter out at least 95% of all particles 0.3 microns in size. The magenta filter is designed to remove at least 99.97% of particles of that size, a particularly hard size to capture.

If you require use of a respirator (dust mask or cartridge type), employees need annual training and fit testing. They must be clean-shaven wherever the respirator seals to the face. They need medical approval, to ensure wearing the respirator won't cause too much stress on their heart and lungs. And you need a written program specifying how respirators are to be taken care of.

If you let employees use respirators, including the N95 dust mask, but don't make it mandatory, you still need to ensure they are healthy enough to wear the respirator. And you need written procedures to ensure the respirators are maintained and used in such a way that they do not cause harm (for instance, they need to be kept clean). You need to give employees Appendix D to OSHA's respirator standard (readily available online, or contact us for a copy). You do not need to provide annual training and fit testing. And – a big deal - you do not need to require employees to shave.

Where can you get the medical evaluation? Use an occupational health provider. It might be as simple as having the employee fill out a confidential questionnaire. Two companies offer online questionnaires, with review as needed by an occupational physician. A number of clinics in Minnesota offer the questionnaire as something employees can fill out at work and send in, with employees only needing to go into the clinic if an answer on the questionnaire raises a red flag. The cost: roughly \$30 per person, if no additional evaluation is needed.

A quick summary: Anyone who uses any type of respirator (the paper-type dust mask, a cartridge respirator, or even an air supplying respirator) needs to have had medical approval to wear that. If use is not mandatory, you also need to provide guidelines to ensure use doesn't cause harm, and you need to provide the employees with Appendix D. If use is required, as for painters working with isocyanates, you also need to provide annual fit testing and training. They must be clean-shaven if the respirator seals to the face.

If you have questions about respirator selection and use, chemical exposures, OSHA inspections, OSHA grants, or other safety or environmental issues, contact CHESS at 651-481-9787; toll free at 877-482-4377, or carkey@chess-safety.com. CHESS specializes in helping small to medium sized business with occupational health and safety issues. We have been providing services to the automotive industry for almost 20 years.

<p>This article is intended to provide general information (not advice) about current safety topics. To discuss your specific concerns and how CHESS may help, please contact CHESS at 651-481-9787 or chess@chess-safety.com</p>

This article originally appeared in *AASP News* (October 2014).