

BODY WORK AND REPAINTING VEHICLES



Preparing vehicles for body work or repainting involves many hazards to the eyes, skin, hearing, breathing, etc. Body work must be done in a well-ventilated area.

Hazard: Body Fillers

Details

- Catalysts used to cure body fillers are normally peroxides. Styrene may be present in body fillers

Threat

- Irritation to your skin (dermatitis) and/or eyes
- Irritation to your lungs if inhaled

Safe Work Guidelines

- Work only in an area that is well ventilated; if necessary, consult an occupational hygienist or a ventilation engineer to make sure you have the proper exhaust system
- Wear impervious coveralls, eye protection recommended by the Material Safety Data Sheet and a NIOSH-approved air-purifying respirator
- User barrier creams and rubber or latex gloves

Hazard: Sanding Dust

Details

- Exposure can occur while fine-sanding topcoats and primers, many of which contain heavy metals such as lead, chromium IV and cadmium that can become airborne during sanding

Threat

- Difficulty breathing
- Irritation to nose and throat
- Prolonged exposure could cause permanent lung damage
- Exposure to heavy metal can cause nerve damage

Safe Work Guidelines

- Use local exhaust; consult an occupational hygienist or a ventilation engineer to make sure that you have the proper exhaust system
- Wear a dust mask
- Use sanders (rotary, orbital or straight-line) equipped with local exhaust ventilation as part of the tool's design

Hazard: Sand and Grit

Details

- Found in the abrasive material used in sandblasting and expelled at 65-120 psi

Threat

- Eye irritation or injury
- Cuts and bruises to exposed skin

Safe Work Guidelines

- Wear the appropriate personal protective equipment (hard hat, impact-resistant face-piece, safety glasses with side shields, heavy gloves, impervious coveralls)
- Use a commercially available portable dust extractor

Hazard: Silica

Details

- Found in the sand used for sandblasting old paint off metal vehicle parts. Inhaling silica releases enzymes that destroy lung tissue and eventually cause emphysema (difficulty with breathing)

Threat

- Lung damage (silicosis)
- Emphysema

Safe Work Guidelines

- Consult the joint health and safety committee's silica assessment for information about exposure in your workplace
- Consider using a silica-free abrasive
- Ask your safety supply company for the proper equipment and training in its use
- Blast only in a well-ventilated area that has local exhaust
- If you do your sandblasting in one area, use an air line respirator (supplied with bottled air or an air source well away from where you work)
- If you move around your site in a truck to do your sandblasting, wear a NIOSH-certified dust mask or cartridge-type respirator
- Use a vacuum with a special high-efficiency filter or wet the dust thoroughly and then scrape it up; don't use brushes to sweep it up

See Regulation 845: Designated Substance – Silica

Hazard: Solvents

Details

- Found in body fillers, pre-cleaners and cleaners. Used to clean metal before applying body fillers
- Vapours from solvents can explode and burn

Note: Solvents include toluene, MEK (methyl ethyl ketone), methylene chloride and MIK (methyl isobutyl ketone). Some under coatings still use solvents.

Threat

- Irritated eyes and throat
- Burns
- Loss of consciousness
- Irritation to the skin (dermatitis) and removal of the fats and oils from the skin resulting in severely cracked skin
- Repeated exposure may result in nervous system damage

Safe Work Guidelines

- Use the solvent recovery equipment and filters according to the Ministry of Labour's Engineering Data Sheet 4-16: Solvent Recovery Equipment
- Use barrier creams and gloves to protect your hands from dermatitis; check the product Material Safety Data Sheet for the appropriate type of glove
- Wear a NIOSH-approved organic vapour respirator with a mist filter

Hazard: Vibration

Details

- Occurs while sanding, grinding, and hammering, and is transferred from the tool to the soft tissue of your hands

Threat

- Circulatory and vascular disorders (e.g., Raynaud's disease – tingling and numbness in the fingers when exposed to cold)

Safe Work Guidelines

- Use anti-vibration gloves with rubber pads on the fingers and palms (e.g., Sorbothane) or tool wraps
- Avoid tools that vibrate at low frequency (20-130 Hz); if possible, purchase tools that have internal damping
- Take regular breaks (every 10-15 minutes) and shake out your hands or change tasks for 5 minutes

Hazard: Compressed Air

Details

- Powers equipment
- A blast of air at 40 psi can cause blindness and deafness or both

Threat

- Eye irritation or injury
- Painful or fatal injuries if it penetrates the skin

Safe Work Guidelines

- Change the compressor oil every 2 to 3 months
- Have an adequate supply of oil in the machine and in stock
- Inspect compressed air hoses regularly and replace any that are cracked, worn, or frayed
- Wear safety glasses or a face shield
- Use the recommended air pressure for the job as outlined in the supplier's technical bulletins
- Do not point the nozzle at yourself or anyone else
- Do not use compressed air to clean dust off clothing or skin
- Use proper measures – not your hands – to seal leaks in the air lines or at joints
- Let the ventilation system or dust extractor run for several minutes

Hazard: Compressed Gases

Details

- Found in oxygen and acetylene cylinders and mixed gases

Threat

- Leaks, fire and explosion

Safe Work Guidelines

- Store cylinders upright, separately from each other and supported tightly by wall chains
- Close cylinder valves tightly after use
- Ensure that the tanks are not top heavy

Hazard: Noise

Details

- Sandblasting usually occurs at 100-105 decibels

Threat

- Hearing damage, deafness

Safe Work Guidelines

- Wear hearing protection and make sure other workers near you are also wearing hearing protection

Hazard: Welding Flame

Details

- Created by a welding torch while removing damaged metal vehicle parts or attaching replacement metal parts

Threat

- Fire, burns
- Eye damage through radiation

Safe Work Guidelines

- Remove all flammable liquids from the area
- Keep a fire extinguisher close by in case sparks ignite combustible material in the vehicle

- Use a welding hood with the correct protective filter, welding gloves, coveralls and heat-resistant safety shoes

Hazard: Welding Fumes

Details

- Created by a welding torch and can contain poisonous heavy metals

Threat

- Lung damage through inhalation
- Nervous system damage due to exposure to hot metal fumes

Safe Work Guidelines

- Use a welding helmet, portable fume extractor and portable welding screen
- Wear a NIOSH-approved air-purifying respirator or a NIOSH-approved dust mask for fumes; refer to the MSDS

Hazard: Working in a Fixed or Awkward Position

Details

- Muscles tire quickly when you stay in a fixed or awkward position which causes them to be at a higher risk for injury

Threat

- Muscle strain and associated tendon, nerve, disc or joint pain (common areas include low back, shoulder, elbow and wrist)

Safe Work Guidelines

- Keep parts, tools and supplies as close to you as possible
- Use height-adjustable controls on hoists and platforms to place vehicles and parts in the ideal work zone (e.g., if you're standing, between your shoulder and knuckle height)
- If possible, use two hands to support hand tools

- If you are standing in one place or in a confined space, use a foot rest, ideally at 6 to 10 inches off the ground (e.g., foot stool or tool box)
- Take frequent, short breaks:
 - Short jobs: 15 second break for every 1-2 min. of work
 - Long jobs: 5 min. break for every 15-20 min. of work
- Change to a task that involves moving around or uses a different body part to improve your blood flow

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