

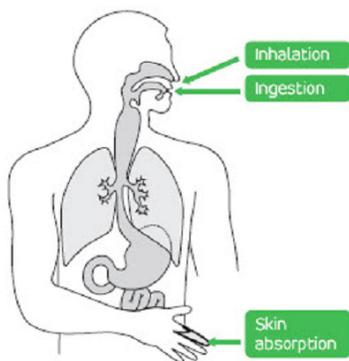


ATU Bulletin

YOUR RIGHT TO KNOW ABOUT FLEET MAINTENANCE CHEMICALS

Fleet maintenance workers use products and chemicals that are toxic to the lungs, skin, liver and other body organs. Some exposures, such as inhaling diesel exhaust, can lead to cancer. Employers must increase protection by providing information and labeling of diesel fuel and other chemical hazards and applying the new Globally Harmonized System (GHS) to Safety Data Sheets (SDS). This factsheet explains how you could be exposed to toxic chemicals, how the exposures should be reduced, and how to get information that can protect you and your coworkers.

Routes of Exposure



How chemicals get into your body

- You can breathe in vapors or small particles (inhalation). Example: Diesel exhaust has particles and vapors
- If your hands are contaminated, you can swallow chemicals on food, or by smoking or touching your mouth (ingestion). You may also ingest particles you breathed in by coughing up then swallowing the particles. Example: lead paint particles
- Some hazards enter the bloodstream directly through the skin and mucous membranes (absorption) or through cuts (injection). Example: degreaser solvents, germs
- Wearing contaminated clothing makes inhalation, absorption and ingestion more likely by keeping chemicals around your body longer.

Some chemicals that can affect maintenance workers

Type of chemical	Examples	Effects	Controls
Volatile solvents used in degreasing and cleaning	Trichloroethylene, Carbon tetrachloride, Methylene chloride	Sleepiness, central nervous system depression. Liver and kidney damage	Substitution with water-based degreasers; containment
Particulates	Diesel exhaust, Metal fumes (welding), Dusts (sanding), Asbestos	Lung irritation, metal fume fever, Cancer	Ventilation (local and general); respirators if not controlled
Fluids	Used engine oil, transmission fluids, antifreeze	Skin irritation, Severe lung damage if particles inhaled	Careful storage and disposal

You can read your worksites' SDS to find out about all the chemicals used there.

Employers should reduce or prevent exposure to toxic chemicals by:

- ✓ **Substitution:** Using safer chemicals.
- ✓ **Engineering Controls:** Installing equipment such as enclosures and ventilation.
- ✓ **Administrative Controls:** Providing time and space for cleaning up regularly, and training on safe use, storage and disposal of chemicals.
- ✓ **Personal Protective Equipment:** Issuing gloves, goggles, coveralls, and boots. In rare situations, respirators may be needed, with a respiratory protection program.

The Hazards of Diesel Fuel and Diesel Exhaust

Diesel fuel can cause rare but serious health problems if enough is inhaled in small spray particles or absorbed through the skin. When diesel burns in an engine or in a fire, it produces particulates, vapors and gases that may lead to lung disease and cancer in transit workers, as well as short-term hazards including carbon monoxide. A study of retired bus mechanics showed higher rates of emphysema than in others workers.¹ Recently, the widow of New York City maintainer received workers compensation for lung cancer caused by his work.²

Working around diesel engines might be less hazardous than it used to be because of recent **engineering controls** such as ventilation and **substitution** of low sulfur fuel. OSHA recommends that employers **monitor** for carbon monoxide, nitric oxide, and nitrogen dioxide to make sure the controls are working.³ OSHA has not yet set a permissible exposure limit on the diesel particulate matter (DPM) that may be what causes cancer related to diesel exhaust. However, diesel fuel and its byproducts are covered by the HCS so any known hazards associated with this fuel must be reported on the material safety data sheet.

Use the SDS to Understand Diesel Fuel and Exhaust Hazards⁴

Section 1 tells you the name of the product (Diesel Fuel, All Types, with a lot of synonyms). It lists who makes it, and a number to call in case of an exposure or spill.

Section 2 identifies the chemical and its hazards. This is the first place to go for information in an emergency. It should include pictograms that illustrate the hazards. Key words and sentences explain the hazards, precautions, emergency practices, and disposal. Sections 5-7 and 9-10 of the SDS explain these in more detail.



The flame pictogram shows that the chemical can burn. This is especially important for emergency responders to know.



The exclamation mark warns that diesel fuel **can cause immediate irritation and poisoning.** If fuel mists or droplets are inhaled, the lungs can swell and block breathing. High vapor levels can make workers sleepy.



The head image is used for long term health hazards. **Repeated splashing on the skin without washing it off can lead to cancer, as can working around diesel exhaust.**

Section 3 tells you exactly what is in the product – diesel fuel and a small amount of naphthalene. This section is especially important for products that contain a mixture of different chemicals.

Section 4 covers first aid instructions, includes “**Do not induce vomiting**” because this could cause droplets to enter the lung and lead to fatal swelling.

Section 8 explains that ventilation may be needed to limit air vapor levels. Hand and eye protection should be used at all times, and respirators for emergencies such as fires.

Section 11 provides detailed information on the toxic impact that may help you better understand acute and long-term risks to you and the environment.

Endnotes

1 Gillespie, R., Watt, E., et al. (2009). Health Status and Disease Prevalence in Retired Transit Workers. Healthy Aging for Workers: Silver Spring.

2 <http://www.pooleshaffery.com/News/2014/October/Diesel-Exhaust-Emissions-A-New-Liability.aspx>

3 Diesel Exhaust/Diesel Particulate Matter Hazard Alert, (2013) www.osha.gov/dts/hazardalerts/diesel_exhaust_hazard_alert.html

4 Based on the diesel safety data sheet found at [www.hess.com/docs/us-safety-data-sheets/dieselfuel_alltypes_includingultralowsulfur_diesel\(ulsd\).pdf?sfvrsn=2](http://www.hess.com/docs/us-safety-data-sheets/dieselfuel_alltypes_includingultralowsulfur_diesel(ulsd).pdf?sfvrsn=2)