

Environmental Solution, Inc.



Are Toxic Solvents Sickening Your Susceptible Workforce?

It's a well-known fact that millions of workers in several industries are negatively affected by the use of toxic solvents. Trouble is, they're still being used in today's modern workplace, and even with strict safety measures in place, **these volatile chemicals continue to pose a dangerous health threat to workers and therefore, can significantly impact a company's bottom line.**

In fact, you don't have to look too far to find hundreds of examples of how these harmful substances can wreak havoc in the workplace, especially for those workers who are exposed over time.

For example, just a quick review of websites like The World Health Organization, US Dept. of Labor's Occupational Safety & Health Association, and the Agency for Toxic Substances & Diseases Registry show they all have lengthy lists of information on health issues that arise as a result of being exposed to these harmful substances.

Industrial solvents are known to affect the:

- respiratory tract
- skin
- eyes
- liver
- kidneys
- cardiovascular system
- and the nervous system

The respiratory tract and the skin are the fastest way in which chemicals are absorbed by the body.

Health symptoms can include:

- headache
- dizziness
- nausea
- weakness

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- muscle pain
- unconsciousness
- fatigue
- difficulty concentrating
- and memory loss

And this is not an exhaustive list. Symptoms will vary depending on how much exposure, whether short or long-term, which, of course, can affect a person's ability to work, so increased sick days and worker compensation claims can happen as a result. And naturally, long-term employees will likely be vulnerable and suffer the most.

Some of the most toxic chemicals contained in solvents can include:

- benzene
- ethylene
- perchloroethylene
- styrene
- toluene
- trichloroethylene

For example:

Styrene: According to the Occupational Safety & Administration, about 90,000 workers, including many who build boats, showers and tubs are at risk of styrene exposure through their use of industry-related resins, rubbers and plastics. This chemical's adverse effects can be harmful to the central nervous system, causing confusion, drowsiness, dizziness and headache. The skin, eye and upper respiratory tract can also be affected. Chronic effects can include fatigue, weakness and depression.

Toluene: A 2003 Informa Healthcare study by M. Gerald Ott, W. F. Diller and Athena T. Jolly says that long-term exposure to toluene diisocyanate, a substance used in manufacturing polyurethane sealants and adhesives as well as surface coatings, cast elastomers and foams, can result in "bronchial asthma and an accelerated rate of decline in lung function."

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Trichloroethylene: The US Centers for Disease Control has stated in one of their occupational safety and health guidelines about this chemical commonly used in metal degreasers, that "acute inhalation or ingestion of trichloroethylene has caused reversible peripheral nerve degeneration, injury to the liver and kidneys and to the cardiovascular and gastrointestinal systems, depression of the central nervous system, coma, and sudden death due to respiratory failure, cardiac arrhythmia, or liver or kidney failure", and that long-term exposure "can cause headache, cough, double vision, impaired coordination and senses of touch and smell, anxiety, dizziness, giddiness, weakness, tremor, slowness of heartbeat and intolerance to alcohol".

The above brief examples demonstrate the detrimental affects some of these toxic substances can have on people at work. So what's the answer to reducing the risk of exposure? Using proven, safe, non-toxic, neutral pH, rapidly biodegradable **bioremediation products that pose no threat to human health or the environment.**

In brief, bioremediation is the process of using naturally-occurring, safe and beneficial micro-organisms to degrade environmentally-harmful contaminants and turn them into non-toxic compounds. Additionally there is no need for protective equipment or specialized training with these products. (But beware, there are some manufacturers who claim their industrial cleaning products are safe and "green". Just make sure you look for products that are neutral pH, non-corrosive and non-toxic--contact us for a complete list of what to watch out for.)

A simple solution: by using the **right kind of non-toxic solvents, employers can save thousands of dollars** in employee health and disability claims and avoid reduced productivity, while making their workplace a much safer, cleaner and more eco-friendly work environment.

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