

Know your hazard: Liquid Industrial Paints

What are liquid industrial paints?

Liquid industrial paints are of two types, water-based and solvent-based. They are distinguished on the basis of amount of Volatile Organic Compounds (VOC) content present in them.

Water-based or emulsion paints



Solvent-based or oil-based/alkyd paints



Sources of exposure to liquid industrial paints

Workers can be exposed to harmful effects of paints while:



Brushing or rolling



Application by spray



Using cleaning agents and reducing agents on paints

Harmful effects of using solvent-based or oil-based/alkyd paints

Exposure risk to solvent-based paints increases because of their composition that includes reducing agents and clean-up solvents. Certain solvent-based paints include isocyanates, a class of chemical compounds.

Exposure to isocyanates can cause:



Skin irritation



Chest tightness



Difficulty in breathing



Adverse effect to respiratory tract



Sensitisation to isocyanates*

How can one protect against it?

In order to reduce exposure and risks to workers, you can:



Get Respiratory Protective Equipment (RPE).












Conduct risk assessment to compare exposure levels with limits.



Implement engineering controls such as local exhaust ventilation (LEV).

What RPE does 3M recommend for protection against liquid industrial paint?

3M offers respiratory protection equipment designed for different types of paint, whether water-based or solvent-based, and the specific airborne contaminants.

Type of Respirators	Recommended 3M Respiratory Protective Equipment**	
 Powered Air Respirator		
 Supplied Air Respirator	 3M™ Versaflo™ Vortex Cooling Assembly V-100	
 Reusable Respirator	 3M™ Secure Click™ Full Facepiece Reusable Respirator FF-800 or Half Facepiece HF-800 Series	 3M™ Secure Click™ Multi-Gas/Vapor Cartridge D8006 (Use with Filter Retainer D701 and Pre-Filter D7N11 if application is spray painting)
 Disposable Respirator	 3M™ Particulate Respirator 8577, P95, with Valve and Nuisance Level Organic Vapour Relief	 3M™ Particulate Respirator 9542V, KN95/P2, with Valve and Nuisance Level Organic Vapour Relief

*It is estimated that 5% - 20% of workers can become sensitised to isocyanates. Sensitisation is the body's allergy-like response to a substance that has been inhaled or touched by a susceptible individual.
**This is only recommendation for minimum PPE required. Each work application must be evaluated by a competent person as required by local law and regulation for the hazard and risk before selection of right PPE. Workplace rules and regulations must take precedent, if more stringent.



REQUEST A DEMO

To know which respiratory protection is best suited for your work environment, scan the QR code.



READ MORE

For more information on the hazard and product disclaimers, scan the QR code for the technical bulletin.



EXPLORE MORE

To discover variety of respiratory protection equipment from 3M, for your workers, scan the QR code.

