

HAZARD ALERT

Solvents, thinners, flammables

Date of Issue: January 11, 2010

Hazard Summary

Many businesses and industry sectors use solvents, thinners and other flammable products such as: acetone, alcohol, benzene, gasoline, glycol, kerosene, methanol, mineral spirits, naphtha, toluene, turpentine and others, on a daily basis. These products can also be found in other commonly used materials such as adhesives, carpet glues, cleaning fluids, epoxy resins, hardeners, lacquers, paints, primers, and asphalt or coal tar.

When handled improperly these products pose a significant risk of fire and explosion and may cause serious health effects in workers.

Hazards:

Fire or Explosion

Use of these products in enclosed or poorly ventilated areas may cause a sufficient build-up of vapours to the point where sparks, open flames, or static electricity could cause a fire or explosion.

Static electricity can occur when fabrics (clothes, rags) are rubbed together, as well as when a liquid passes through a pipe or opening or splashes into a container.

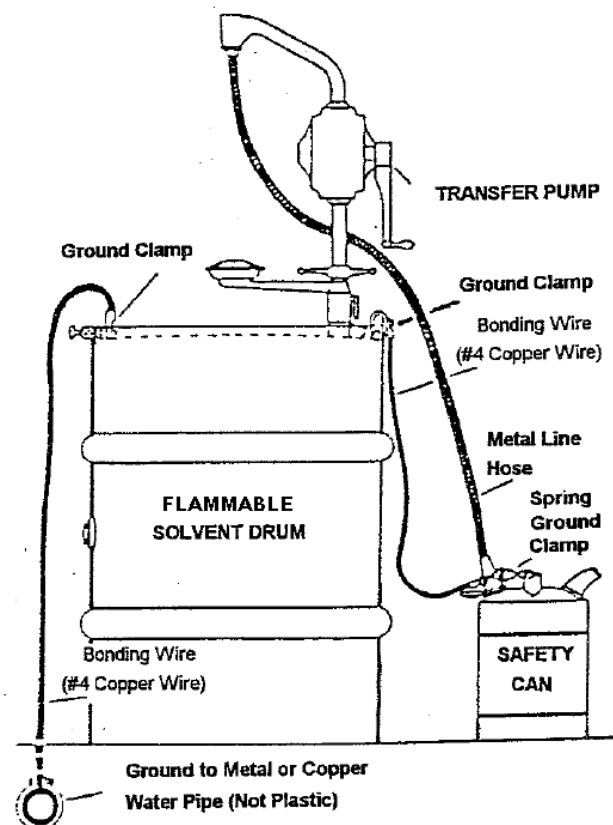
Grounding and bonding is a method for dealing with static electricity. Bonding reduces the difference in electrical potential between containers by connecting them with a conductive wire. Grounding reduces the potential difference between an object and ground; a proper ground wire will continuously discharge a conductive object to ground.

Inhalation of Vapours

Workers may be exposed to high levels of solvent or other vapours when working with these products. Prolonged and repeated exposure may produce both short and long term health effects.

Direct skin contact

Direct contact may cause skin disease and other health effects



Preventive Measures:

- The manufacturer's instructions in the Material Safety Data Sheets and on container labels must be strictly followed
- All equipment and containers must be properly grounded or bonded to eliminate static charge
- Adequate ventilation must be provided
- All open flames and sources of ignition that may be present in the area itself must be assessed and controlled
- All equipment present in the area should be fire-resistant and explosion-proof
- Adequate product-specific education must be provided to workers
- Workers must be trained in and provided with appropriate respiratory protection where needed and its use ensured
- Where needed a respirator program must be instituted for the proper selection, use and maintenance of respirators
- Where needed protective gloves or cream barriers must be used to prevent direct skin contact with these products
- Where available the use of less hazardous products is suggested

Regulatory Considerations:

[Workplace Hazardous Materials Information System](#) - regulations

[Occupational Safety General Regulations](#)

- Breathing Hazard – section 13
- Ventilation – section 15
- Housekeeping – section 24
- Fire protection and escape – section 25; note: Fire Prevention Act is now the [Fire Safety Act](#)
- Handling and Storage of Material – Part 5
- Tools – Part 9
- Welding, cutting burning, soldering – Part 10
- Electrical safety – Part 11

[Fire Safety Regulations](#)

Useful links:

[Bonding and Grounding Illustrations](#), by the Industrial Accident Prevention Association (IAPA). Provides information on 19 typical assemblies, from bonding and grounding of buildings, fixed equipment, drop valves, to mixing units, small volume solvent handling and more.

[Breathe Safer: How to use respirators safely and start a respirator program](#) A WorkSafe BC document providing information on different types of breathing hazards and respirators. It explains how to choose, fit and care for a respirator; as well as containing a section on effective respiratory protection programs.