



MINISTRY OF  
MANPOWER



**SCDF**  
The Life Saving Force

**MOM/OSHD/2024-02**

**06 February 2024**

**To: All Motor Vehicle Workshops Owners, P&FM Licence Holders and Other Interested Persons**

**Joint Circular issued by  
the Ministry of Manpower (MOM) and the Singapore Civil Defence Force (SCDF)**

### **SAFE STORAGE AND HANDLING OF FLAMMABLE SUBSTANCES**

#### **Background**

- 1 On 7 March 2023, an explosion followed by a fire occurred in a room that served a motor workshop, causing parts of the building's walls to collapse. Investigations revealed that the fire was likely due to the ignition of accumulated flammable vapours from a waste oil collection tank within the room.
- 2 Days later, another fire incident occurred on 13 March 2023. The fire engulfed an industrial building and caused minor injuries to two workers. Investigations indicated that uncontrolled electrostatic discharge had ignited flammable vapours generated during a dispensing process. Both incidents were dangerous occurrences that could have caused fatalities.

#### **Storage of Flammable Liquids**

- 3 To prevent similar fires, occupiers shall ensure that flammable liquids are kept away from all sources of heat or ignition such as hot surfaces, open flames and even equipment that are not suitably enclosed to prevent internal sparks from igniting any flammables in the surrounding (see Annex A for examples); and stored in containers made of non-combustible materials of sound integrity, labelled, and covered to prevent accidental spills and accumulation of flammable vapours in the workplace (see Annex B for examples).
- 4 Effective controls shall also be implemented to mitigate electrostatic discharge. This includes the installation of grounding and bonding systems as well as the conduct of annual continuity tests, both by competent persons<sup>1</sup>.

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<sup>1</sup> Such as licensed electrical workers (LEWs).

## Management of Flammable Wastes

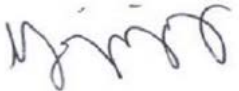

5 Flammable liquid wastes, such as petrol collected from vehicle repair/servicing activities, can cause fires and explosions. Motor workshop operators, for example, shall identify and ensure that liquid wastes containing such flammable liquids are stored separately from non-flammable liquid wastes, before collection by licenced toxic industrial waste collectors (TIWCs). Mixtures of flammable liquid waste and liquids shall be treated as flammable liquids unless they have been laboratory-tested as non-flammable and may therefore be subjected to licensing requirements by the SCDF.



6 TIWCs licensed by National Environment Agency shall be engaged to dispose flammable liquid waste or mixtures. A list of TIWCs can be found [here](#) or via the QR code.

## Other Control Measures to Prevent Fires and Explosions

7 There are other control measures for flammable substances that are required to prevent fires and explosions in the workplace. Occupiers can refer to the resources listed below, for information and practical guidance. Occupiers can also refer to SCDF's website on [Information of Petroleum and Flammable Material \(P&FM\) Storage Licence](#).

 <b>JAIME LIM</b> for Commissioner for Workplace Safety and Health Occupational Safety and Health Division Ministry of Manpower	 <b>SHAIFUL HERMAN</b> for Commissioner Singapore Civil Defence Force Ministry of Home Affairs
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## Resources

- [WSH Guidelines on Flammable Materials, published by the WSH Council](#)
- [Environment Public Health \(Toxic Industrial Waste\) Regulations](#)
- [Fire Safety Act and Fire Safety \(Petroleum and Flammable Materials\) Regulations](#)
- [WSH \(Risk Management\) Regulations](#)
- SS 532: Code of Practice for the Storage of Flammable Liquids
- SS 586-1: Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods – Part 1: Transport and Storage of Dangerous Goods
- SS 586-2: Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods – Part 2: Globally Harmonised System of Classification and Labelling of Chemicals
- SS 603: Code of Practice for Hazardous Waste Management

### Annex A – Store Flammables away from Heat and Ignition Sources

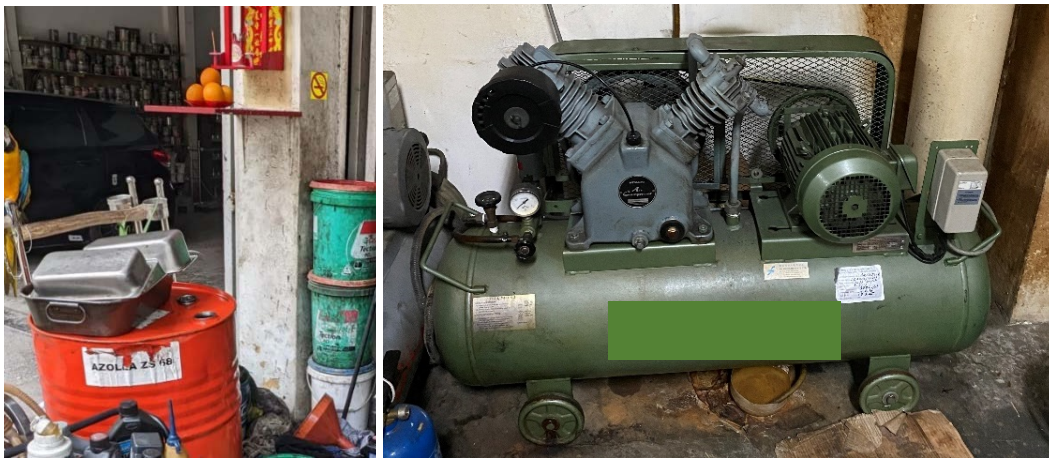
The lack of an effective bonding and grounding system can lead to unintended discharge of accumulated electrostatic charges during the transfer of flammable liquids.

Unsealed containers holding flammable liquids are capable of emitting flammable vapours into the work environment.



When flammable vapours meet heat or ignition sources, fires and explosions can occur. Some heat or ignition sources include:

- Open flames, such as welding, candles;
- Sparks and excessive heat from machinery moving parts;



- Overloaded power sockets, exposed electrical wires and circuitry.



**Annex B – Suitable Storage for Flammable Liquids**



Cabinets for flammable substances



Sealed metal drums



Metal jerry cans