

FAQs on machinery safety and combustible dust

General

- 1. *My company is unable to comply with these new requirements by 1 January 2025, will there be any action taken against my company?***

The new requirements will take effect on 1 January 2025. For a start, MOM will take an educational approach to guide companies, and may allow more time for compliance should there be valid grounds for consideration such as needing to work with upstream supply chain to effect the requirements.

Machinery Safety

- 2. *What are the new classes of higher risk machineries in the expanded Fifth Schedule of the WSH Act?***

The Fifth Schedule is expanded to include the following classes of higher risk machineries:

- Sheet benders and sheet rollers;
- Lathes and milling machines;
- Machines designed for industrial use for any of the following purposes:
 - cutting, including table saws and slicing machines;
 - packaging, including palletisers, balers and compactors;
 - mixing by mechanical movement, including paddle mixers and ribbon mixers; and
 - handling or processing of food, including grinders, mincers, blenders and juicer.

- 3. *How does the expansion of the Fifth Schedule affect me, as a manufacturer or supplier of machinery?***

If you are the manufacturer or supplier of the machineries listed in the Fifth Schedule of the WSH Act, you will need to fulfill the duties under section 16 of the WSH Act.

They include providing information to end users, on how to use and maintain the machineries, so that the machineries are safe when properly used and maintained.

4. *How does the expansion of the Fifth Schedule affect me, as a person who erect, install or modify machinery?*

If you are a person who erects, installs or modifies machineries listed in the Fifth Schedule of the WSH Act, you will need to fulfill the duties under section 17, subsections 1 to 3 of the WSH Act.

They include ensuring that the machineries are erected, installed or modified in such a manner that they are safe when properly used, such as ensuring that the erection, installation or modification is carried out in accordance with the information supplied by the designer, manufacturer or supplier.

5. *When I purchase a machinery listed in the Fifth Schedule, how do I know if it meets the requirements in the WSH Act?*

You are advised to purchase machinery from reputable manufacturers or suppliers who can fulfil the duties required of manufacturers and suppliers of machineries under section 16 of the WSH Act.

The list of Approved Codes of Practice issued by the Workplace Safety and Health Council contains safety standards relevant to machineries that can be referenced. If additional assistance is required to verify if a machinery meets safety standards, companies can also contact one of the inspection companies under the Inspection Programme for Safe Machines.

Combustible Dust

Applicability of the combustible dust requirements

6. *How do I know if the combustible dust requirements are applicable to me?*

The combustible dust requirements will be applicable if there is any combustible dust being handled, sorted, packed, stored, processed, manufactured, generated or used at your workplace.

You may refer to the *Fourth Schedule* in the Workplace Safety and Health (General Provisions) Regulations for a prescribed list of combustible dust or the safety data sheet of the substance to determine if it is a combustible dust. Alternatively, you may also refer to internationally established guides such as [National Fire Protection Association \(NFPA\) 652](#) - Standard on the Fundamentals of Combustible Dust and

Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA) – [Database combustion and explosion characteristics of dusts \(GESTIS-DUST-EX\)](#) for more information on various combustible dusts.

7. *Are combustible dust requirements applicable if I handle combustible substances with larger particle sizes?*

There is no specific cut-off on particle size as a criterion for combustible dust. Typically dust or powder forms of the substances listed in the Fourth Schedule of the Workplace Safety and Health (General Provisions) Regulations or internationally established guides are classified as combustible dust. To scientifically determine whether a substance is combustible dust, and to understand its ignition and explosion properties, you may send the material for combustible dust testing. You may refer to the list of [combustible dust service providers](#) published on our website for companies that provides combustible dust testing services.

Notification of Combustible Dust

8. *Why does the occupier need to notify MOM one month before starting the use of a new combustible dust at or above the threshold quantity?*

The one-month advance notice allows MOM and the occupier sufficient time to assess potential risks associated with the introduction of the combustible dust at the workplace and ensure that adequate control measures are put in place for safe operation. MOM may schedule inspections or provide guidance before the combustible dust is used.

9. *Do I notify MOM only when the total quantity of a category of combustible dust (e.g., organic combustible dust) reaches the threshold quantity stated in the Fourth Schedule of the WSH (General Provisions) Regulations?*

No. As long as any particular combustible dust reaches the threshold quantity in your factory, you are required to notify MOM. For example, for organic combustible dust of potato and its derivatives (e.g. potato starch) and sugar, the threshold quantity is 100kg each:

Scenario 1: 50kg of potato starch and 50kg of sugar – Do not need to notify MOM

Scenario 2: 100kg of potato starch and 50kg of sugar – To notify MOM on the use of potato starch

Scenario 3: 100kg of potato starch and 100kg of sugar – To notify MOM on the use of potato starch and sugar

10. I intend to increase the quantity of an existing combustible dust used in my processes beyond the threshold quantity, and I understand it is required to notify MOM “as soon as occupier has reason to so believe”. What is the timeline expected for notification?

We understand that the quantity of combustible dust may fluctuate from time to time due to changing business operations. When an occupier has any information that may indicate the operations will result in the quantity of the particular combustible dust reaching or exceeding the threshold quantity, they must notify MOM as soon as it is possible.

11. Having notified MOM on the use of combustible dust, do I need to notify MOM again if the quantity falls below the threshold or if I cease using one of several types of combustible dust?

No. You are required to notify MOM not later than one month after you have ceased the use of all combustible dust at your workplace.

12. Is notification required for transient handling of Fourth Schedule dusts (e.g. warehouses with short-duration product turnover)?

Yes, notification is required based on the maximum expected inventory at any given time.

13. For metal substances, should I notify for the metallic dust (e.g. titanium, zinc), as well as the metallic compound in powder form (e.g. titanium dioxide, zinc sulphate)?

No, companies are only required to notify substances specifically named in the Fourth Schedule of the WSH (General Provisions) Regulations. In the case of metallic dusts,

manganese dusts, aluminum dusts etc, notifications are required as they are highly combustible in nature. Related compounds of the metallic dusts are not required to be notified. However, companies must implement adequate control measures in accordance with approved codes and standards to prevent dust explosions if substances or compounds are identified as combustible.

Determining the quantities in factory for combustible dust notification

14. How do I determine the quantity of combustible dust in my factory that will likely reach or exceed the thresholds stated in the Fourth Schedule?

The quantity is the maximum amount in the factory at any one time, including gross capacity defined for storage tanks, vessels, process equipment, as well as combustible dust in their original packaging e.g., 25kg bags of flour.

15. How should we calculate the total quantity of a Fourth Schedule dust when it is part of a mixture (e.g. polyethylene mixed with other compounds)?

For mixtures, companies should:

- Calculate and report the quantity of the pure prescribed dust based on composition;
- If the composition cannot be determined, report the total quantity of the mixture and include this information in the remarks section

Labelling of combustible dust

16. Who should label packages and containers of combustible dust?

Manufacturers and suppliers under section 16 of the WSH Act are required to provide information on the safe use of any hazardous substance. One way to do so is to provide warning labels on containers of combustible dust, to communicate on the hazard. Occupiers also have a duty to ensure warning labels are affixed on all containers of combustible dust in the workplace to alert users.

17. My products stored in my factory do not have a label that convey the hazard of combustible dust, how can I comply with this new labelling requirement?

For existing containers of combustible dust stored in your factory, you can request from manufacturers or suppliers, a label to affix on product containers or, to incorporate into existing labels. For samples of labelling, please refer to [examples of warning labels](#).

For containers used as intermediate storage of combustible dust, occupiers are to affix a label that includes “Warning: May form explosible dust-air mixture if dispersed”, to communicate the hazard of combustible dust in the workplace.

18. My supplier is unable to provide the new labels for my products by 1 Jan 2025, will there be any enforcement action taken by MOM?

We understand that company may need more time to prepare the warning labels for combustible dust. MOM will allow time for you to work with your suppliers or manufacturers to comply with these new requirements.

19. If GHS labelling is required for combustible dusts, would this also apply to food ingredients such as flour and sugar?

GHS labelling requirements are not applicable to organic combustible dust such as food ingredients.

A label with a warning statement of “Warning: May form explosible dust-air mixture if dispersed” would be sufficient for any container containing at least 25kg of organic combustible dust.

Notifying owner of the factory (e.g. building owner, landlord)

20. What is the purpose of notifying the owner of the factory?

Combustible dust explosions have a potential of propagating beyond a workplace’s boundary. In a multi-tenanted building, there are communal shared facilities such as corridors and common areas. In an emergency, fire protection provisions and other

measures have to consider the possibility of a dust explosion, so that escalation does not affect other units or communal shared facilities.

Owner of the factory could also check with tenants if adequate control measures are in place to manage the combustible dust risk within their premises.

21. Is there a standard format that occupiers should use to notify owner of the factory on the use of combustible dust?

No, there is no specific format. The main intent of this notification is to facilitate communication between owners and occupiers of tenanted units that handle combustible dust so that the associated risks or incompatible works can be managed effectively.

22. Who is required to notify MOM and owner of the factory on combustible dust?

If your workplace meets the definition of a factory under the Fourth Schedule of the Workplace Safety and Health Act and is handling the list of combustible dust in the Fourth Schedule of Workplace Safety and Health (General Provisions) Regulations, your factory will need to submit a notification to MOM and owner of the factory.