

GOOD PRACTICES FOR SMALL BAG FILLING – COARSE PRODUCTS

This activity covers bagging operations for small bags (15kg-50kg) with dry products containing crystalline silica. This sheet is only relevant to products in which the grains have not been ground down to flour, i.e. sand sized or coarser. The bagging of flours is covered in sheet **2.2.30b**.

ACCESS

Restrict access to the work area to authorised personnel only.

DESIGN AND EQUIPMENT

- Ensure that bags and bag filling equipment are fit for purpose. The quality of the bags is crucial to preventing leakage of dust through the bag seams.
- Use bagging heads in which the product passes down the centre and in which an outer, annular ring is used for the purposes of dust extraction and for the removal of displaced air. The outer, annular ring should be connected to a dust extraction unit (e.g. bag filter).
- Ensure that bags are effectively clamped/sealed onto the bagging head during bag filling to prevent the escape of dust.
- Position the bagging head inside a dust extraction hood which is enclosed as much as possible.
- The dust extraction system serving the hood must have sufficient capture velocity to prevent the escape of dust emitted through the bag seams and dust discharged from the bagging head when the bag is removed. Refer to task guidance sheet **2.1.13**.
- Bags must be sealed shut as soon as they are removed from the bagging head. Bags with self-sealing valves are available or, alternatively, bag stitching or heat sealing techniques may be used.
- Consider mechanical/pneumatic assistance with bag handling.
- In automated bagging systems, the use of a carousel system enables many bags to be filled simultaneously at a very slow rate using a screw feed. When bags are filled slowly, less dust is emitted.



MAINTENANCE

- Ensure equipment used in the task is maintained as advised by the supplier/installer in efficient working order and in good repair.
- Replace consumables (filters etc.) in accordance with the manufacturer's recommendations.

EXAMINATION AND TESTING

- Visually check the equipment at least once per week for signs of damage or, if it is in constant use, check it more frequently. If used infrequently, then check it before each use.
- Obtain information on the design performance of the dust suppression and/or extraction equipment from the supplier. Keep this information to compare with future test results.
- Keep records of inspections for a suitable period of time which complies with national laws (minimum five years).
- Put in place measures to control the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated.

CLEANING AND HOUSEKEEPING

- Clean your workplace on a regular basis.
- **DO NOT clean up with a dry brush or using compressed air.**
- Use vacuum or wet cleaning methods.
- Store bags in a safe place and dispose of empty bags safely.

TRAINING

- Give your employees information on the health effects associated with respirable crystalline silica dust.
- Provide employees with training on: dust exposure prevention; checking controls are working and using them; when and how to use any respiratory protective equipment provided and what to do if something goes wrong. Refer to task guidance sheet **2.3.4** and part 1 of the Good Practice Guide.

SUPERVISION

- Have a system to check that control measures are in place and that they are being followed. Refer to task guidance sheet **2.3.3**.
- Employers should make sure that employees have all the means to perform the checklist given below.

PERSONAL PROTECTIVE EQUIPMENT

- Refer to task guidance sheet **2.1.15** dedicated to Personal Protective Equipment.
- Risk assessment must be carried out to determine whether existing controls are adequate. If necessary, respiratory protective equipment (with the appropriate protection factor) should be provided and worn.
- Provide storage facilities to keep personal protective equipment clean when not in use.
- Replace respiratory protective equipment at intervals recommended by its suppliers.

EMPLOYEE CHECKLIST

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| <input type="checkbox"/> Make sure that the bagging machine is working properly. | <input type="checkbox"/> Look for signs of damage, wear or poor operation of any equipment used. If you find any problems, tell your supervisor. | <input type="checkbox"/> Even if it is not normally necessary for you to wear a dust mask, it may be necessary for you to wear one temporarily in the event of a spillage or if other control measures fail. | equipment provided in accordance with instructions. |
| <input type="checkbox"/> Make sure that bags are free from defects, especially as regards valve construction. | <input type="checkbox"/> If you think there is a problem with your dust control equipment, ensure additional control measures are taken to reduce exposure to respirable crystalline silica while the problem persists. | <input type="checkbox"/> Clear up spills straight away. Use vacuum or wet cleaning methods. | <input type="checkbox"/> Use handling aids when available. |
| <input type="checkbox"/> Make sure that the dust extraction system is switched on and is working correctly. | | <input type="checkbox"/> Use, maintain and store any respiratory protective | <input type="checkbox"/> Check and implement the measures of controlling the risk of bacterial growth within water sources used across site, focusing most on systems where water droplets will be generated. |

This guidance sheet is aimed at employers to help them comply with the requirements of workplace health and safety legislation, by controlling exposure to respirable crystalline silica. Specifically, this sheet provides advice on dust control during the filling of small bags with coarse products.

Following the key points of this task guidance sheet will help reduce exposure.

Depending on the specific circumstances of each case, it may not be necessary to apply all of the control measures identified in this sheet in order to minimise exposure

to respirable crystalline silica. i.e. to apply appropriate protection and prevention measures. This document should also be made available to persons who may be exposed to respirable crystalline silica in the workplace, in order that they may make the best use of the control measures which are implemented.

This sheet forms part of the Good Practices Guide on silica dust prevention, which is aimed specifically at the control of personal exposure to respirable crystalline silica in the workplace.