

# FL6

## COSHH essentials for millers



This information will help employers, the self-employed and franchisees comply with the Control of Substances Hazardous to

Health Regulations 2002 (COSHH), as amended, to control exposure to flour dusts, etc, and protect workers health.

It is also useful for trade union and employee safety representatives.

This sheet describes good practice using respiratory protective equipment with dust extraction.

It covers the points you need to follow to reduce exposure to an adequate level.

It is important to follow all the points, or use equally effective measures.

Get safety data sheets for improvers.

### Main points

- Bag tipping creates high dust levels.
- Keep exposure as low as possible using all the controls in this sheet.
- Make sure the controls work.
- You need to use health surveillance - see sheet G402.
- Also see sheet FLO.

# Manual addition of bulk improvers to flour in flour milling

## Control approach R

### Respiratory protective equipment (RPE)

#### Hazard

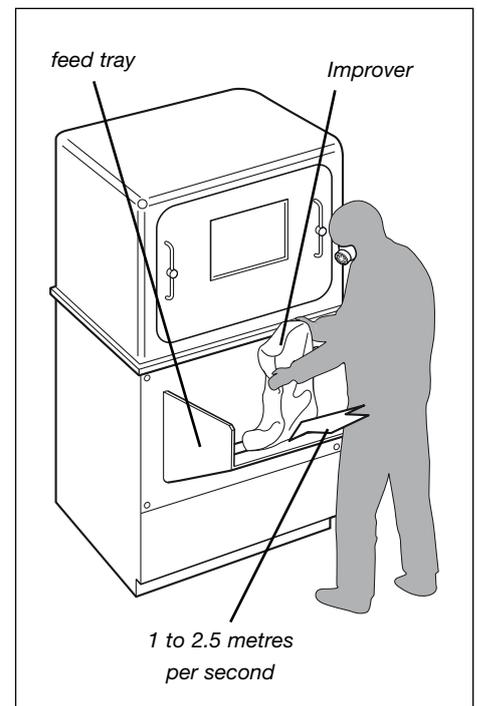
- ✓ Handling flour improvers produces airborne dust. Stop dust getting into the air.
- ✓ Improvers contain enzyme mixtures that cause asthma. Even short-term exposures can cause harm.
- ✓ Control exposure to stop occupational asthma developing. If an individual does develop occupational asthma, avoid further exposure.
- ✓ Keep inhalation of improver dust as low as possible. A few micrograms of pure enzyme is enough to cause a problem.
- ✓ When all controls are applied properly, less than 2 mg/m<sup>3</sup> flour dust is usually achievable (based on an 8-hour time-weighted average). This will also control improver dust.

#### Access and premises

- ✓ Only allow access to authorised staff.
- ✓ Provide good washing facilities.

#### Equipment

- ✓ Can you automate this task?
- ✓ Respiratory protective equipment (RPE) is normally needed.
- ✓ Use only low-dust improvers, eg dust-suppressed products or low-dust granules.
- ✓ Wherever possible, avoid weighing. Use single-dose packets or whole bags.
- ✓ Provide extraction at the addition point. You need an inward air speed between 1 and 2.5 metres per second.
- ✓ Fit a manometer or pressure gauge near the extraction point, to show that the extraction is working properly.
- ✓ Have a supply of clean air coming into the workroom to replace extracted air.
- ✓ Consult a qualified ventilation engineer to design new control systems and to update current controls - see sheet G406.



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### Respiratory protective equipment (RPE)

- ✓ RPE is normally needed.
- ✓ RPE is also needed for maintenance and cleaning.
- ✓ Provide RPE with an assigned protection factor (APF) of at least 20. See sheet R3.
- ✓ Disposable RPE is acceptable.
- ✓ Make sure all RPE is fit-tested - get advice from your supplier.
- ✓ Replace RPE filters as recommended by your supplier. Throw away disposable masks at the end of the shift.
- ✓ Train workers to use RPE properly.
- ✓ Keep RPE clean.

### *Other protective equipment*

- ✓ Provide clean, dust-resistant coveralls.

### Procedures

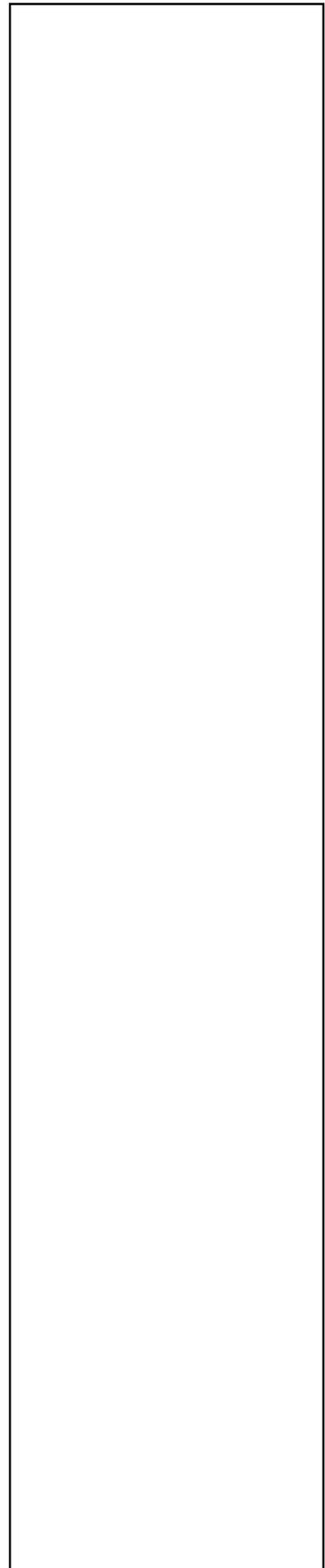
- ✓ Always confirm that the extraction is turned on and working at the start of work. Check the gauge.
- ✓ Ensure that workers check that their RPE works properly every time they use it.
- ✓ Train workers to tip additive gently into the hopper - never dump it.
- ✓ Bag crushing creates a lot of dust. Workers should roll up empty bags with the open end in the extraction zone.

### Maintenance, examination and testing

- ✓ Keep equipment in effective and efficient working order - follow instructions in suppliers' manuals.
- ✓ Repair faulty extraction systems as soon as possible.
- ✓ Every day, look for signs of damage.
- ✓ At least once a week, check that the extraction system and gauge work properly, with no dust leaks.
- ✓ You need to know the manufacturer's specifications to check the extraction's performance.
- ✓ If this information isn't available, hire a competent ventilation engineer to determine the performance needed for adequate control.
- ✓ The engineer's report must show the target air speeds.
- ✓ Keep this information in your testing logbook.
- ✓ Get a competent ventilation engineer to examine the system thoroughly and test its performance at least once every 14 months. See HSE publication HSG54 - see 'Further information'.
- ✓ Examine and test all non-disposable RPE thoroughly at least once every three months.
- ✓ Keep records of all examinations and tests for at least five years.

### Health surveillance

- ✓ Use health surveillance for asthma - see sheet G402. There is a chance of asthma developing even with good controls in place.
- ✓ Consult an occupational health professional - see 'Useful links'.



### Cleaning and housekeeping

- ✓ Deal with spills immediately. Shovel spills carefully into a waste bag.
- ✓ Every day, clean the workroom. Can you use wet cleaning methods?
- ✓ Clean thoroughly at least once a week, including overhead beams, heating pipes and light fittings.
- ✓ Provide an integrated vacuum cleaning system or a Class H vacuum cleaner fitted with a HEPA filter to clear up dust. See sheet FL7.

**Caution: Never allow the use of brushes or compressed air for removing dust from clothing, surfaces or from inside machinery.**

### Training and supervision

- ✓ Working in the right way and using the controls correctly is important for exposure control. Train and supervise workers. See sheet FL0.
- ✓ Tell workers that flour dust and enzyme improvers can cause asthma, and how to recognise the early signs.

### Further information

- *Maintenance, examination and testing of local exhaust ventilation* HSG54 (Second edition) HSE Books 1998 ISBN 0 7176 1485 9
- *Respiratory protective equipment at work: A practical guide* HSG53 (Third edition) HSE Books 2005 ISBN 0 7176 2904 X
- R2 from [www.hse.gov.uk/pubns/guidance/rsseries.htm](http://www.hse.gov.uk/pubns/guidance/rsseries.htm)
- G402, G406 from [www.hse.gov.uk/pubns/guidance/gseries.htm](http://www.hse.gov.uk/pubns/guidance/gseries.htm)
- For environmental guidelines see sheet FL0

### Useful links

- Your trade association may advise on health and safety consultants and training providers.
- HSE priced and free publications are available from HSE Books  
Tel: 01787 881165 Website: [www.hsebooks.co.uk](http://www.hsebooks.co.uk).
- For information about health and safety ring HSE's Infoline Tel: 0845 345 0055 Textphone: 0845 408 9577 e-mail: [hse.infoline@natbrit.com](mailto:hse.infoline@natbrit.com).
- Contact the British Occupational Hygiene Society (BOHS) on 01332 298101 or at [www.bohs.org](http://www.bohs.org) for lists of qualified hygienists who can help you.
- Look in the Yellow Pages under 'Health and safety consultants' and 'Health authorities and services' for 'occupational health'.
- Also see [www.nhsplus.nhs.uk](http://www.nhsplus.nhs.uk).

### Employee checklist

- Is the extraction switched on and working properly?  
Check the gauge.
- Work carefully – don't create dust.
- Check that any RPE works properly every time you use it.
- Look for signs of leaks, wear and damage.
- Clear up spills immediately.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Co-operate with health surveillance.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice.