# HANDLING AND WORKING WITH ENZYME CONTAINING INGREDIENTS IN THE BAKERY SECTOR



A typical hazard label for enzyme-containing formulations looks like this.

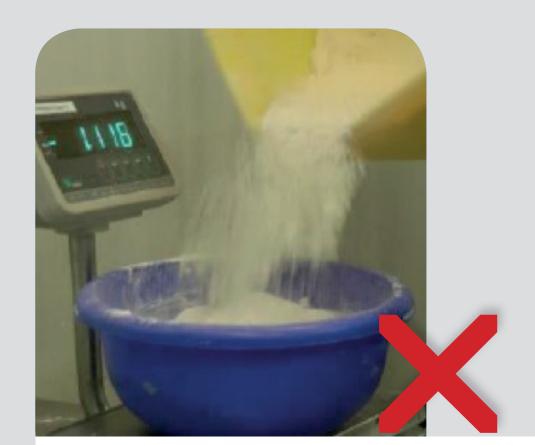
## ALWAYS FOLLOW THESE IMPORTANT GUIDELINES

#### CONTAINMENT AND CONTROL OF ENZYME DUST AND AEROSOL SPRAY

- Enzyme-containing ingredients must always be handled and processed in ways that avoid the formation of dust clouds or aerosol spray.
- Engineering control measures should be in place to avoid the formation of dust or aerosol as far as possible.
- Where any openings are unavoidable in the process then suitable ventilation and air flow control should be in place.

#### SAFE WORKING PRACTICES

Weighing of flour and ingredients:

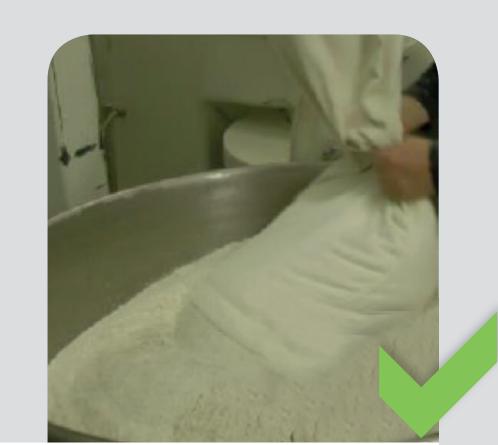




Pouring ingredients from height creates airborne dust.

Unloading flour and improvers from a silo into mixing bowls (semi-industrial craft bakery):

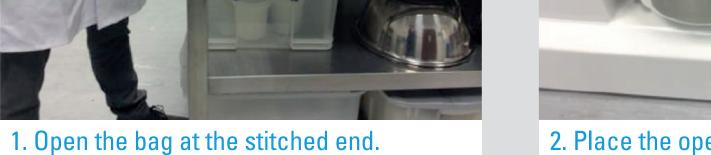




Elevated dumping height and violent shaking of the guidance hose creates airborne flour

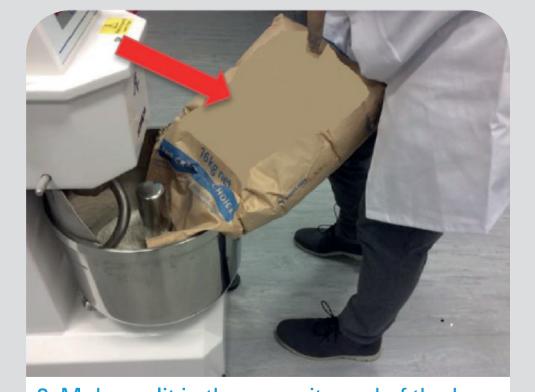
Unloading flour and improvers from bags into mixing bowls (artisan bakery):







2. Place the open bag end in the mixing bowl.



3. Make a slit in the opposite end of the bag with a knife.

Please use:



4. Tip the bag gently into the bowl.

should be a high efficiency HEPA H14.

A vacuum cleaner fitted with two filtration steps. The final filter

dealing with spillages or undertaking cleaning operations.

Always wear respiratory and personal protective equipment when



5. Lift the bag so that the flour slides out cleanly into the bowl.

## SPILLAGE CLEAN-UP / CLEANING PLANT AND EQUIPMENT FOR INGREDIENTS THAT CONTAIN ENZYMES

Always clean up immediately after any spillage.

#### Do not use:

Brushes, brooms, high pressure water hoses and/or compressed air.









## WHY DO WE NEED A DUST CONTROL PROGRAMME?

## Dust exposure can damage our health!

- ► Enzyme dust may provoke sensitization in the same way as inhaling common allergens like pollen or house dust.
- Symptoms include red eyes, runny nose, shortness of breath and wheezing.

Flour and other bakery ingredients - like enzymes - are allergens **Exposure can be prevented or minimised to a safe level by:** 

- Preventing the dust from becoming airborne.
- Using appropriate protective equipment.
- Always following the correct operating procedures.

#### **BEST PRACTICES**

- Prevent dust formation.
- Avoid spreading dust from one area to another.
- Always clean up after a significant spillage.
- Change your working clothes according to company instructions.
- Some operations, for instance during spill clean-up, may require respiratory protection (a P3, FFP3 or N100 should be used).
- Use additional protective clothing such as gloves and safety glasses to minimise any risk of skin contact.

#### FIRST AID MEASURES IN CASE OF EXPOSURE TO ENZYME



Eye contact: Rinse carefully with clean water for several minutes. Remove contact lenses if they are present and it is easy to do so. Continue rinsing if eye irritation persists.



Skin contact: Wash with plenty of soap and water. Remove contaminated clothing.



Ingestion: Rinse mouth thoroughly. If swallowed, call a doctor/physician if you feel unwell.



Inhalation: If breathing is difficult, move to fresh air and remain resting in a position that is comfortable for breathing.

General advice: Seek medical advice from local first aid or a company doctor if respiratory irritation or shortness of breath persists.



