



## Protective Clothing for the Food Industry

### INTRODUCTION

#### ***Protective clothing performs several functions in the Food Industry:***

**Legal** – Various Regulations prescribe the type of clothing which must be worn by food workers;

**Safety** – When a product has to be used which is potentially harmful to the user, adequate personal protection must be provided;

**Production protection** – In addition to meeting the legal requirements, most food manufacturers, especially those making “high risk products”, adopt a much wider approach when choosing garments, and major retailers may have their own requirements for suppliers;

**Denoting rank** – The “high hat” of the chef de cuisine, the trilby of the manager and the coloured hat band of the supervisor, all indicate to a new worker the chain of command. Heat-sealed badges can show who is a first-aider, safety representative or union official;

**Denoting place of work** – This is of particular importance where cross contamination of processed food from raw food must be prevented. A worker who has crossed to another area without changing his overall is immediately apparent if he is wearing a different colour or trim or style from the others in that area. It is strongly recommended that there is a different colour coding for “high care” and “low risk” production areas including the changing rooms.

**Encouraging clean working** – It may not be possible to enforce “pride in the uniform” in the same way as in the forces but if a worker is provided with well-fitting, comfortable clothing which bears the company logo and is regularly laundered, he will know that his employer is concerned about cleanliness and hygiene. (Company logos also are recognised by the major retailers and suppliers).

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**Please remember, in most industries (e.g. the car industry) employees wear protective clothing to protect themselves and their clothing from the materials with which they are in contact. In the food industry, protective coats, hats and gloves etc are worn to protect the food from the handler.**

### LEGAL REQUIREMENTS

The Food Safety (General Food Hygiene) Regulations state that *“Every person working in a food handling area shall maintain a high degree of personal cleanliness and shall wear suitable, clean, and where appropriate, protective clothing.”* These Regulations also state that *“adequate changing facilities for personnel must be provided where necessary”*.

The Health & Safety at Work Act gives an employer the general duty of ensuring the health, safety and welfare of all his employees. Health and Safety Regulations can be made under this act *“Imposing requirements with respect to the provision and use in specified circumstances of protective clothing - including clothing affording protection against the weather”*.

The Control of Substances Hazardous to Health Regulations (COSHH) stipulate that where the use of such substances cannot be controlled by other means, *“The employer shall provide those employees with such personal protective equipment as will adequately control their exposure to substances hazardous to health”*. Certain cleaning compounds and insecticides are obvious examples of where special clothing is necessary for those using them. However, common ingredients in bulk may be irritant or have other characteristics that make the wearing of protective clothing a wise precaution.

## HEAD COVERINGS

The hair represents a source of both foreign matter contamination and bacterial contamination. It therefore follows that hats should be worn in food premises and that the hair should be entirely enclosed. It should be explained to the wearers to why there is a need for hair covering. Remind them of their hygiene training and the need to be aware of the risks of “*foreign bodies*” and pathogens from their hair. Many customer complaints involve finding hairs in food).

Whatever style of hat is chosen, it is best, especially for long hair, if hairnets are worn underneath the hat. The hairnets should be brightly coloured (usually blue) to be easily seen. Some are manufactured with small metal tags. These have the advantage that if they accidentally enter a product, a metal detector will locate them. Over the hairnet should be worn one of the various hats available. Styles must be of a generous size to cover all the hair and be comfortable. Elastication must be inserted in a way that will avoid any irritation in use. Many types can have a snood attached to contain the hair gathered at the neck. For absolute protection a balaclava hat which covers all but the face may be preferred. The choice will depend very much on the type of food and the duties of the worker. In recent years hats and hairnets are often replaced by mob caps which cover all the hair on the head. Preferably, the mob caps should be single use ones with a silver strip. These caps are disposed of when the wearer leaves the food area, and when they return a new one is worn. Mop caps come in many different colours (green, yellow, red, blue etc) and therefore be chosen to fit with the colour coding of the work area.

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Trilby hats are often used for managers. These have the disadvantage of being difficult to clean and of turning yellow. It should be recognised that they have a limited life and replacements should be available.

Hard hats may be necessary as a safety precaution where head impact is possible, e.g. with items travelling on an overhead conveyor. They have the advantage of being easily cleaned.

Disposable paper hats of the forage type used in catering outlets are not suitable for food factories, except for visitors who do not come into close proximity with uncovered food. Disposable hats made from non-woven fabrics can be effective for high-risk areas where a daily clean issue is a must, and may be a cheaper alternative to laundering.

All the head hair should be covered including beards and moustaches. Beard snoods in net and disposable fabric are available, and should be worn to minimise contamination. This also includes the site engineers, all contracted staff and any visitors to the site.

The ears, eyes and nose of a worker may require protection. For someone handling dusty ingredients, such as flour, a face mask will protect the lungs from inhaled dust. If the workstation is near to noisy machinery, ear defenders must be provided. If there is any danger of glass bottles or pressurised containers exploding, or if liquids are being poured which are irritant or corrosive, the eyes must be protected by plastic goggles or face masks according to the circumstances. This is particularly necessary when the worker wears glass spectacles.

## OVERALLS

The body is commonly covered by one of three types of overgarment; a coverall (boiler suit); separate jacket or shirt and trousers; or a coat overall perhaps with overall trousers. The coat overall has the advantage of being suitable for wear over a skirt.

When deciding which style to adopt, attention should be given to how staff will dress and undress. For all practical purposes it is impossible to remove a coverall without trailing a considerable portion of it on the floor and risking unacceptable contamination both from general changing areas. Remember that the protective clothing particularly for “high care” work areas should never be worn outside the production area. The operatives must change out of it when leaving their work area even when visiting the canteen. Protective clothing should **never be worn** when visiting the toilet.

The cost will be almost doubled if jacket and trousers are chosen. Also there is little difference in the cost of laundering any one item of clothing, as each has to be individually handled.

Many methods of garment closure have been tried such as Velcro, metal or plastic zips and metal or plastic press-studs. Metal press-studs are currently most commonly used but although they are extremely reliable they can on rare occasions become detached. Their metal construction is then an advantage in that they are metal detectable. Some garments are now being made with the press-studs concealed behind a fly front. This can make it difficult for the laundry to check for missing studs but this design has proved reliable. However, if the wearer spends time leaning against a worktop, the pressure of the stud against the surface can rapidly wear a hole in the front of the garment. The number and spacing of studs on the front of the garment is

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important to avoid gaping. A pitch of 90mm (3.55 in) between studs has been suggested. For some areas it is necessary for garments to be closed up to the throat, which will require a modification to the design and extra press-studs. Elasticated cuffs will give a snug fit at the wrist but they may be liable to deterioration and the deeply ribbed fabric is more difficult to clean.

Garments should not have outside pockets, as there is the danger that pens and other items may fall out when the wearer leans over a container of products. In some manufacturing areas inside pockets as well as outer pockets are not allowed. All personal items must be left in a locker area.

Whatever style of garment is worn, it must completely cover all other clothing. Garments should not be worn unbuttoned even to the waist, nor should short-sleeved overalls be worn over long-sleeved garments.

## **FOOTWEAR**

Ideally, footwear should be dedicated to the work area. Operatives should ensure that the shoes that they choose are comfortable and well fitting. The shoes should be readily cleanable. They should be stored on cleanable racks in the changing room.

It is good practice as well as for health and safety reasons that the wearing of safety shoes should be compulsory. Suppliers and stockists will visit factories, often with a mobile shop and fitting room, or items can be obtained by mail order through the personnel or welfare department. Shoes should be chosen which have a reinforced toecap and a non-slip sole. Visitors must also comply with footwear requirements. Accordingly, a range of sizes of spare footwear should be kept available for them. Otherwise, plastic overshoes should be available to cover the visitors' shoes when they reach the changing room.

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Wellington boots will be required where wet processing or cleaning is carried out, or where a footbath is installed at a doorway to prevent cross-contamination.

Footwear should be colour coded where ever possible as a reminder of the hygiene requirements of the production area.

### GLOVES

*“Better clean hands than dirty gloves”* is a saying with a certain amount of truth in it. It is obvious when hands feel sticky or look dirty, it is not so obvious when gloves are in that condition. Wearing gloves is never an excuse for not washing them and the hands. It has been found that wearing impervious gloves can cause the skin to perspire, bringing bacteria to the surface. Should the glove become punctured, the result can be contaminated food. Many companies carry out hand hygiene spot checks. This proves a valuable tool when the operative believes he or she would rather wear gloves this can be easily done with glo-germ kits.

#### ***The occasions when the wearing of gloves is recommended are as follows:***

**High Risk Products, e.g. cooked meats** – Thin disposable polyethylene gloves formed from flat film are commonly worn but the fit is usually poor and the wearer feels clumsy. Thin cast nitrile or natural rubber gloves are better. Arrangements must be made for the regular changing of such gloves. Occasionally, wearers can have an allergic reaction to latex gloves.

**Sensitive Products, e.g. chocolate items** – Fingerprints may be left on slightly soft chocolate or other coated products. To avoid them, thin cotton gloves can be worn but care must be exercised to ensure that these are changed for clean ones at regular intervals.

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**Aggressive Products, e.g. salt, fish or cartons** – The hands may need protecting against irritants such as brine or abrasion from constant handling of boxes. In these conditions, PVC or rubber gloves are best.

**Hot and Cold Products** – Special fabric oven gloves are available for taking hot trays from the oven. Some are intended to be disposed of when soiled and before becoming frayed, others are intended to be laundered a few times, often on the premises. Their construction should be such that there are no raw fabric edges exposed to fray. Insulated gloves are available for staff working with frozen foods.

**Personal Safety** – The suppliers of cleaning chemicals which are caustic or otherwise corrosive or irritant will advise on the type of gloves to be worn, as will those from whom insecticides are obtained. In butchery departments, chainmail gloves are a wise precaution, also a chainmail apron.

## FABRICS AND LAUNDERING

Most protective clothing is now made from a blend of 65% polyester and 35% cotton. This is comfortable in wear, absorbs spillages and wears well. It can be efficiently cleaned using modern laundry equipment, especially if given a permanent press finish.

Disposable garments in polyethylene film or non-woven viscose fabric have a limited use, mainly for visitors. Their wear resistance is usually inadequate for regular use. However, plastic aprons worn over garments can significantly reduce laundry costs and offer extra protection in wet situations.

An adequate supply of clean garments is essential. Everyone should have at least a weekly change, some will require a daily change. Except for shops and small establishments, where staff may wash their own garments at home, it is usual for garments to be sent to a laundry either on site or external

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contractor. A wide range of different options is available. Garments may be purchased or rented, laundered on site or sent to a specialist laundry. A contract system may be used where the contractor supplies and launders garments for a weekly charge. The choice may depend on the rate of staff turnover and whether the work is seasonal.

The provision of a clean clothing service is a major item of costs for any food company. Before taking a decision, the person responsible for hygiene or quality assurance should confirm that the laundry is capable of operating to the required food industry standards. It is essential that the laundry is audited to check that it is aware that protective clothing for the food industry is processed separately from other protective clothing (e.g. that worn in the motor trade). Some laundries only handle food garments or have a “high care” facility within the laundry to wash and dry them.

### ***Some of the factors to be checked would be:***

Is the laundry operating according to HACCP principles?

Are the premises so arranged that soiled garments are loaded into one side of a washing machine and removed via another door on the “clean” side of a barrier wall after completion of the process?

Is the “clean” area under positive pressure with filtered air to minimise ingress of contaminants?

Are the floors, walls and ceiling of the building clean?

Their cleaning schedules and cleaning procedures.

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What standards of personal hygiene are practiced by the laundry staff.

Do they wear appropriate protective clothing?

Do they have suitable changing rooms and changing procedures?

Is the laundry dedicated to processing food industry garments or are these garments separated from other industrial garments?

Is the laundry externally audited on a regular basis?

Does the laundry have microbiological checks carried out on garments?

## CONCLUSION

**The importance of the correct protective clothing policy cannot be over emphasised. People are a major potential source of foreign body contamination (hairs, skin scales, threads and buttons from clothing, etc) and microbial (including pathogens) contamination. It is therefore essential that operatives working in the food and related industries are aware of this risk and wear the appropriate clothing in the food production area.**