

Example risk assessment for chilled warehousing

Important reminder

This example risk assessment shows the kind of approach a small business might take. It can be used as a guide to think through some of the hazards in your business and the steps you need to take to control the risks. Please note that it is not a generic risk assessment that you can just put your company name on and adopt wholesale without any thought. Doing that would not satisfy the law – and would not be effective in protecting people.

Every business is different – you need to think through the hazards and controls required in your business for yourself.

Setting the scene

This company provides chilled warehousing facilities (ie at temperatures between 2° and 5° C) at three locations. Capacity at each location is 10000 pallet spaces, using fixed and mobile racking. Pallet throughput at each location averages 4000 a week. The company has just switched from using R22 refrigerant to ammonia.

Twenty people are employed in the warehouses, working a variety of shifts. Three members of staff are from an Eastern European country and of these, only one speaks good English. At busy times, temporary staff from an employment agency may also be employed.

The site manager did the risk assessment, which covers goods inward from the gate to the cold store, its storage and its despatch.

How was the risk assessment done?

The manager followed the guidance in '5 Steps to Risk Assessment' (<http://www.hse.gov.uk/risk/fivesteps.htm>).

- 1) To identify the hazards, the manager
 - Looked at HSE's web pages for free health and safety advice and guidance for the warehousing industry (<http://www.hse.gov.uk/warehousing/index.htm>), and at HSG 76 'Health and Safety in Wholesale and Retail Warehouses' (available from HSE Books, <http://www.hsebooks.com/Books/> or 01787 881165), particularly the chapter on temperature controlled storage.

- Walked around all the areas where the staff, customers and others may go, noting things that might pose a risk, taking into account HSE's guidance.
 - Talked through the issues with the Safety Representative, including how knowledge of risks and risk controls could effectively be communicated to the two staff members who did not speak good English, and on health and safety training for agency staff;
 - Talked to supervisors and other members of staff to learn from their detailed knowledge of particular jobs and areas, and to discuss whether safe working procedures needed to be developed for certain jobs; and
 - Looked at the accident book to get information on past problems.
- 2) The manager then wrote down who would be harmed by the hazards and how.
 - 3) For each hazard, the manager wrote down what controls, if any, were in place to manage these, taking into account HSE's guidance. Where he did not consider existing controls good enough, he wrote down what else was needed to control the risk.
 - 4) The manager discussed the findings with the Safety Representative. Then, to implement the findings of the risk assessment, the manager decided who was responsible for each of the actions that were needed, and by when each action should be done. He wrote this down and when each action was completed, ticked it off and recorded the date.
 - 5) The manager decided to review and update the assessment at least once a year or at any time when major changes to the workplace occurred, such as the introduction of a new plant or process.

Company name: Smith's Chill Store Ltd

Date of Risk Assessment: 1 October 2007

What are the hazards?	Who might be harmed and how?	What are you already doing?	What further action is necessary?	Action by whom	Action by when	Done
Accidental lock-in in the chill store	<i>Employees/others may suffer ill health from prolonged exposure to low temperatures if accidentally locked in the cold store.</i>	<ul style="list-style-type: none"> - Access to the store restricted to authorised, trained persons only. - 'No entry' signs clearly posted. - Emergency exit provided. - Emergency lighting provided (mains powered, battery back up). - Emergency exit door instructions posted on illuminated board by exit. - Trapped man alarm (battery operated, mains back up) next to exit. - Alarms and emergency lighting regularly tested/maintained by competent person. 	<ul style="list-style-type: none"> - Remind all staff that clear access to the emergency exit must be maintained. 	Manager	04/10/07	04/10/07
			<ul style="list-style-type: none"> - Check instructions remain clearly visible. 	Manager	04/10/07	02/10/07
Accidental release of Group 2 refrigerant (ammonia)	<p><i>Staff may suffer fatal respiratory irritation from exposure to ammonia.</i></p> <p><i>Exposure to even low concentrations can cause severe eye and throat irritation.</i></p>	<ul style="list-style-type: none"> - Extraction and ventilation plant installed. - System designed as per industry practice. - Written scheme of examination for all refrigeration plant, including vapour detectors. - Plant examined as per written scheme by a competent person. - Plant maintained by a competent person. - High-hazard maintenance jobs (e.g., oil draining) identified and done by competent people, such as qualified refrigeration specialists, following safe systems of work and using the correct equipment. <p>Staff trained in the risks of ammonia and its effect on health.</p> <p>Emergency plan for ammonia release agreed, including victim rescue policy, and discussed with local fire service.</p>	<ul style="list-style-type: none"> - Ensure that any work on the system where there is potential for ammonia release is done by at least two people (second person to help in an emergency). 	Manager	04/10/07	04/10/04
			<ul style="list-style-type: none"> - Set date for rehearsal of procedures in the event of an emergency alarm going off. 	Manager	04/10/07	02/10/07

		<ul style="list-style-type: none"> - Staff trained in emergency plan. - Vapour detectors near likely leakage points activate alarm and emergency extraction if Workplace Exposure Limit (25 parts per million) reached; - Water shower nearby for those exposed to an ammonia spray; - Windsock to show wind direction in event of a release (staff gather upwind of leak). 	<ul style="list-style-type: none"> - Monthly checks on vapour detectors and alarms. - Check shower still functional. 	Supervisors to arrange	04/10/07	04/10/07
				Supervisors to arrange	04/10/07	04/10/07
<p><u>Workplace transport</u></p> <p>Vehicle movement in the yard and the loading bay - deliveries and despatch.</p>	<p><i>Staff and visitors may suffer very serious, life-threatening injuries, such as fractures and internal damage, if struck by a vehicle.</i></p>	<ul style="list-style-type: none"> - Pedestrians kept apart from moving vehicles by railings and marked walkways. - Road surfaces in good condition. - Measures in place to minimise reversing on site. - Reversing aids (mirrors) in place. - Hi-viz tabard worn by all those entering the yard/loading bay; - Drivers hand in keys when vehicle parked. - All visitors receive site rules/site map. - Sufficient numbers of trained banksmen on site, for each shift. - Any necessary reversing on site directed by a trained banksman, working from a safe position. 	<ul style="list-style-type: none"> - Mark out 'safe area' for visiting drivers during loading and unloading of their vehicle. - Extra signs to remind staff and visitors to always use the marked pedestrian walkways. 	Manager to arrange with facilities team	15/11/07	25/10/07
<p>Vehicle activity in the store</p>	<p><i>Life-threatening Injuries can be caused to staff/visitors if struck by lift trucks (FLT) or other materials handling equipment (MHE)</i></p>	<ul style="list-style-type: none"> - Walkways clearly marked. - Separate entrances to the store for pedestrians and vehicles. - Good lighting throughout. - Mirrors at the end of aisles. - Drivers trained and follow safe systems of work. - Vehicles selected to minimise risk. - Drivers do daily pre-use vehicle checks. - FLT/MHEs maintained to manufacturers instructions and thoroughly examined every 	<ul style="list-style-type: none"> - Instruct drivers not to leave keys in unattended vehicles (to prevent unauthorised use). 	Manager	04/10/07	02/10/07

		6 months by competent person. - Supervisors check driver performance.				
Slips and trips	<i>Staff and others may suffer injuries such as fractures and bruising if they slip on, for example, water or oil or trip over objects.</i>	- Usually good housekeeping – shrink wrap, strapping bands, etc cleared away promptly. - Floor in good condition, any damage quickly repaired. - Pallets stored in designated area. - Staff wear safety shoes with a good grip. - Cleaning materials stored at various points to enable quick clean-up after a spillage.	- Decision taken to move to 'planned cleaning' – as a first step, proposals to be drawn up and discussed with staff.	Shift managers	14/10/07	14/10/07
Falls from height	<i>Staff may suffer severe or fatal injuries if they fall from any height.</i>	- All work at height (eg retrieving dislodged pallets, stock checking) done by trained staff using personnel lifting equipment and following a safe system of work; - Control and use of ladders policy, monitored by supervisors. - Climbing on racking strictly forbidden.	- Reminder to supervisors to check that safe systems of work followed for all work at height. - Post signs reminding staff never to climb racking.	Shift managers Manager	14/10/07 15/11/07	14/10/07 25/10/07
Manual handling	<i>Staff may get injuries or back pain from handling heavy objects, e.g: pallets</i>	- All staff trained in safe manual handling techniques, particularly when 'picking' goods by hand. - All staff trained in safe use of roll cages. - Roll cages with defective wheels taken out of use until repaired.	- Remind staff that roll cages with defective wheels must be taken out of use for repair.	Shift managers	14/10/07	14/10/07
Working in a chilled environment	<i>Employees may suffer discomfort from regular exposure to a chilled environment</i>	- Appropriate personal protective equipment, on advice of supplier, provided. - Work arranged so that staff are not in chill room for uncomfortably long periods. - Drying facilities for wet PPE. - Staff mess room nearby, with a heater and hot drinks available.	- No further action at this stage.			
Falling goods	<i>Staff may suffer injuries such as fractures and bruising from falling stock,</i>	- Staff report broken or dislodged pallets in racking. - Pallet inverter to replace broken pallets. - Racking to SEMA standard and safe working load signage displayed.	- No further action at this stage.			

		- All racking inspected to an agreed programme and maintained as necessary.				
Machinery – conveyor belt for unloading	<i>Staff using the machine may suffer injury from moving parts, particularly where belt meets rollers.</i>	- Staff trained in use of machine. - Dangerous moving parts are guarded to manufacturer instructions, and staff do weekly guarding checks. - Emergency stop buttons provided. - 'No unauthorised use' signage.	No further action at this stage.			
Pallet Inverter	<i>Staff using the machine may be injured by moving parts</i>	- Machine maintained and inspected according to manufacturers instructions. - Staff trained in use of machine, including a pre-use guard check. - When not in use, safety perimeter chain put up with a 'No unauthorised use' sign.	- Draw up safe working procedure, including for clearing blockages, for use of pallet inverter.	Supervisors	31/10/07	30/10/07
Noise	<i>Staff may suffer discomfort and potential hearing damage if working in noisy areas, e.g., near the fans.</i>	- Refrigeration system, including fans, maintained in good condition according to a planned system of work. - Current work practices minimise time spent in noisy areas.	- No further action at this stage.			
Electricity	<i>Staff may suffer electric shock/burns injuries from faulty electrical equipment or installation.</i>	- Electrical installation and all equipment is inspected according to a planned schedule. - Staff report any concerns to shift manager who will take appropriate action.	- No further action at this stage.			
Unfamiliarity with site risks	<i>Visitors may suffer injury or ill-health through lack of awareness of risks on site.</i>	- Visitors to the store must be accompanied by an authorised person. - All work on site by contractors is done according to a permit to work system, monitored by supervisors.	- Discuss with supervisors if the permit to work system is operating effectively and if there is scope to improve it.	Manager	31/10/07	29/10/07
Fire	<i>Staff trapped could suffer fatal injury from smoke inhalation/burns.</i>	Fire risk assessment done as at http://www.fire.gov.uk/Workplace+safety and necessary actions taken.	- No further action at this stage.			