

Example risk assessment for chilled warehousing

Setting the scene

This company provides chilled warehousing facilities (eg at temperatures between 2° and 5° C) at three locations. Capacity at each location is 10 000 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 *Five steps to risk assessment* (www.hse.gov.uk/pubns/indg163.pdf).

- 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, and at HSG76 *Warehousing and storage: A guide to health and safety* ISBN 978 0 7176 6225 8 (available from HSE Books, www.hsebooks.com or 01787 881165), particularly the chapter on temperature-controlled storage;
 - walked around the areas where staff, customers and others may go, noting what might pose a risk and taking HSE's guidance into account;
 - 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 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 The manager took account of 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 when each action should be done. He recorded the date when each action was completed.
- 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.

Important reminder

This example risk assessment shows the kind of approach a small business might take. Use it 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. This 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.

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 who?	Action by when?	Done
Accidental lock-in in the chill store	Employees/others may suffer ill health from prolonged exposure to low temperatures if accidentally locked in the cold store.	<ul style="list-style-type: none"> ■ Access to the store restricted to authorised, trained people 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	4/10/07	4/10/07
			<ul style="list-style-type: none"> ■ Check instructions remain clearly visible. ■ 	Manager	4/10/07	2/10/07
Accidental release of Group 2 refrigerant (ammonia)	Staff may suffer fatal respiratory irritation from exposure to ammonia. Exposure to even low concentrations can cause severe eye and throat irritation.	<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 (eg oil draining) identified and done by competent people, such as qualified refrigeration specialists, following safe systems of work and using the correct equipment. ■ Staff trained in the risks of ammonia and its effect on health. ■ Emergency plan for ammonia release agreed, including victim rescue policy, and discussed with local fire service. ■ 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"> ■ 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	4/10/07	4/10/04 2/10/07 4/10/07
			<ul style="list-style-type: none"> ■ Set date for rehearsal of procedures in the event of an emergency alarm going off. 	Manager	4/10/07	2/10/07
			<ul style="list-style-type: none"> ■ Monthly checks on vapour detectors and alarms. ■ 	Supervisors to arrange	4/10/07	4/10/07
			<ul style="list-style-type: none"> ■ Check shower still functional. 	Supervisors to arrange	4/10/07	4/10/07

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<p>Workplace transport</p> <p>Vehicle movement in the yard and the loading bay – deliveries and despatch</p> <p>Vehicle activity in the store</p>	<p>Staff and visitors may suffer very serious, life-threatening injuries, such as fractures and internal damage, if struck by a vehicle.</p> <p>Life-threatening injuries can be caused to staff/visitors if struck by lift trucks (FLT) or other materials handling equipment (MHE)</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. ■ High-visibility 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 banksmen, working from a safe position. ■ Walkways clearly marked. <ul style="list-style-type: none"> ■ 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 manufacturer's instructions and thoroughly examined every six months by a competent person. ■ Supervisors check driver performance. 	<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. ■ Instruct drivers not to leave keys in unattended vehicles (to prevent unauthorised use). ■ 	<p>Manager to arrange with facilities team</p> <p>Manager to arrange with facilities team</p> <p>Manager</p>	<p>15/11/07</p> <p>15/11/07</p> <p>4/10/07</p>	<p>25/10/07</p> <p>25/10/07</p> <p>2/10/07</p>
<p>Slips and trips</p>	<p>Staff and others may suffer injuries such as fractures and bruising if they slip on, for example, water or oil or trip over objects.</p>	<ul style="list-style-type: none"> ■ Good housekeeping – shrinkwrap, 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. 	<ul style="list-style-type: none"> ■ Decision taken to move to 'planned cleaning' – as a first step, proposals to be drawn up and discussed with staff. 	<p>Shift managers</p>	<p>14/10/07</p>	<p>14/10/07</p>

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Falls from height	Staff may suffer severe or fatal injuries if they fall from any height.	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ Reminder to supervisors to check that safe systems of work followed for all work at height. 	Shift managers	14/10/07	14/10/07
			<ul style="list-style-type: none"> ■ Post signs reminding staff never to climb racking. 	Manager	15/11/07	25/10/07
Manual handling	Staff may get injuries or back pain from handling heavy objects, eg pallets.	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ 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	Employees may suffer discomfort from regular exposure to a chilled environment.	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Falling goods	Staff may suffer injuries such as fractures and bruising from falling stock.	<ul style="list-style-type: none"> ■ Staff report broken or dislodged pallets in racking. ■ Pallet inverter to replace broken pallets. ■ Racking to SEMA standard and safe working load signage displayed. ■ All racking inspected to an agreed programme and maintained as necessary. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Machinery – conveyor belt for unloading	Staff using the machine may suffer injury from moving parts, particularly where belt meets rollers.	<ul style="list-style-type: none"> ■ Staff trained in use of machine. ■ Dangerous moving parts are guarded to manufacturer's instructions, and staff do weekly guarding checks. ■ Emergency stop buttons provided. ■ 'No unauthorised use' signage. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			

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Pallet inverter	Staff using the machine may be injured by moving parts	<ul style="list-style-type: none"> ■ Machine maintained and inspected according to manufacturer's 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. 	<ul style="list-style-type: none"> ■ Draw up safe working procedure, including for clearing blockages, for use of pallet inverter. 	Supervisors	31/10/07	30/10/07
Noise	Staff may suffer discomfort and potential hearing damage if working in noisy areas, eg near the fans.	<ul style="list-style-type: none"> ■ Refrigeration system, including fans, maintained in good condition according to a planned system of work. ■ Current work practices minimise time spent in noisy areas. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Electricity	Staff may suffer electric shock/burns injuries from faulty electrical equipment or installation.	<ul style="list-style-type: none"> ■ Electrical installation and all equipment is inspected according to a planned schedule. ■ Staff report any concerns to shift manager who will take appropriate action. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			
Unfamiliarity with site risks	Visitors may suffer injury or ill health through lack of awareness of risks on site.	<ul style="list-style-type: none"> ■ 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. 	<ul style="list-style-type: none"> ■ 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	Staff trapped could suffer fatal injury from smoke inhalation/burns.	<ul style="list-style-type: none"> ■ Fire risk assessment done as at www.communities.gov.uk/fire and necessary actions taken. 	<ul style="list-style-type: none"> ■ No further action at this stage. 			

Assessment review date: 1/10/08