

Risk / Hazard Assessment & Chemical safety in the workplace





Contents

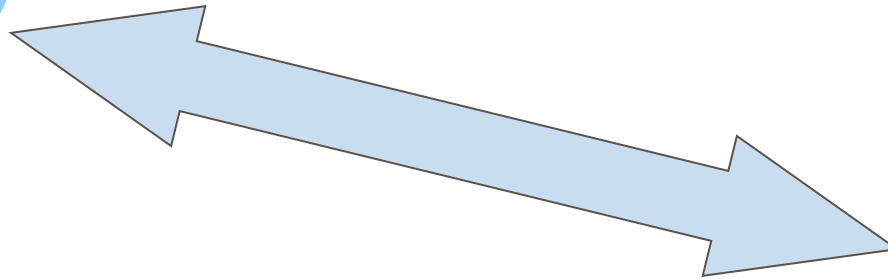
- Introduction
- Risk Management - Hazard Identification, Risk Assessment & Risk Control
- General Safety - Chemical, Gas, Machine/Equipment, Ergonomics
- General Safety Rules
- What do I need to do?

Hazard and risk in the workplace

Person



RISK

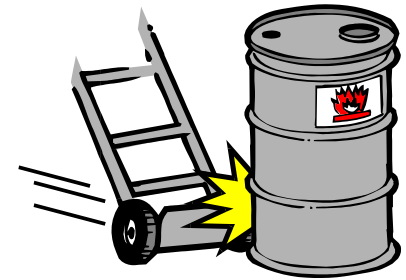


Hazard:
Equipment
Procedure
Chemical

Risk is associated with the potential interaction between the person and the hazard,
ie how likely is it that the harm will result from that hazard

Hazard and risk in the workplace

- Hazard - potential to cause harm
- Risk - likelihood that harm will occur and the consequence



Risk Management

- Hazard Identification
- Risk Assessment
- Risk Control



Hazard Identification - Major hazards in the workplace

- **Noise**
- **Electric Shock**
- **Heat/Cold**
- **Pressure (positive and negative)**
- **Manual Handling**
- **Working Alone**
- **Chemicals**





Risk assessment

Risk = Consequence X Likelihood

The risk assessment must take into account:

- each hazardous substance used
- the information on the MSDS
- the information on the label
- the nature of the work
- any local information regarding incidents, illnesses or diseases associated with the use of each substance

Risk = Consequence x Likelihood

		Likelihood of injury after current controls are considered			
Consequence	Highly Likely	Likely	Occasionally	Unlikely	Highly Unlikely
Major Injury	Extreme	Extreme	High	High	High
Severe Injury	Extreme	High	High	High	Medium
Moderate Injury	High	High	Medium	Medium	Medium
Minor Injury	High	Medium	Medium	Medium	Low
Negligible Injury	Medium	Medium	Medium	Low	Low

Risk control strategy

- Hierarchy of control
- Elimination
- Substitution
- Isolation
- Engineering controls
- Information, training & procedures
- Personal protective equipment

**Most
effective**



**Least
effective**



Risk control

■ Information, training & procedures

Systems of work and safe work procedures

- Good housekeeping and regular cleaning of work areas
- Providing washing facilities
- Reducing the number of people exposed or the duration of exposure

■ Personal protective equipment

Overalls, aprons, footwear, gloves, glasses, goggles, face shields, respirators

Gas Safety

- Ensure correct handling, transport & storage - Upright & secured with chain / fence.
- Follow safe work procedures
- Be aware of emergency procedures - gas leaks
- Ensure gas bottles are changed by a qualified person
- Gas shut off valve to stop supply - Know location



Machine / Equipment Safety

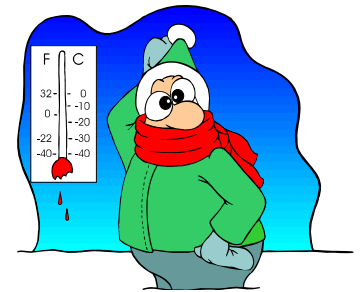
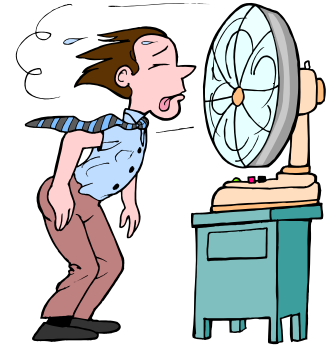
- Induction
- Risk management
- Training
- Supervision
- Safe work procedures



Ergonomics / Manual Handling

■ Identify Hazards

- repetitive or sustained application of force
- repetitive or sustained awkward posture
- repetitive or sustained movement
- application of high force
- exposure to sustained vibration, poor light, heat/cold
- manual handling of loads that are unstable, unbalanced or difficult to hold
- poor housekeeping



Ergonomics / Manual Handling

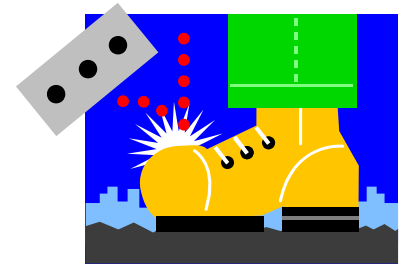
■ Control Risk

- alter workplace or environmental conditions
- alter the systems of work
- change the objects used
- use mechanical aids
- use information, training and instruction



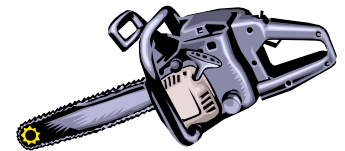
General Safety Rules in the workplace

- General hygiene - wash hands, wear appropriate P.P.E etc.
- Wear closed footwear. Bare feet, thongs and sandals are prohibited
- Wear appropriate clothing and tie back long hair. When using machinery, remove jewellery such as rings if there is a possibility that they will be caught in moving parts



General Safety Rules in the workplace

- Do not run or indulge in horseplay
- Do not use machines or lifting apparatus without prior instruction on safe work procedures and practices
- Avoid lifting heavy objects – use trolleys or share the load
- Observe safety signs at all times



Housekeeping

- Keep floors tidy and dry
- Keep benches clean and free from chemicals and apparatus that is not being used
- Keep aisles free from obstructions
- Clean working area and equipment thoroughly after use
- Keep the interior of supply cupboards clean and clear
- Let any co-workers or visitors know of hazards that exist in your work area



Personal protective equipment

■ Eye Wear

- Glasses, Goggles, Face Shield



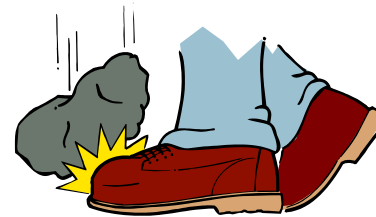
■ Respiratory Protection

- Positive vs negative pressure



■ Clothing/Footwear

- Safety shoes, aprons



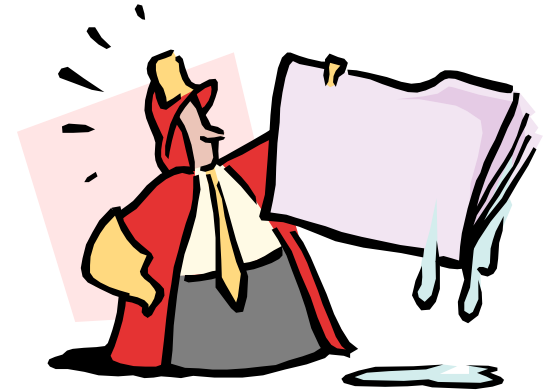
■ Gloves


- Check date, ensure safe to use, change regularly.



What to I need to do?

- Know your responsibilities!
- Perform and document your project risk assessment
- Develop and document your Safe Work Procedures
- Complete training





What should the Safe Work Instructions include?

- ✓ Specific information regarding the hazards and risks
- ✓ Precautions to be undertaken before commencing
- ✓ Personal Protective Equipment (PPE) to be worn
- ✓ Environment
- ✓ **Step by step procedures for the task, including specific instructions in ways to minimize risks**

What should the Safe Work Instructions include?

- ❖ Clean-up procedures
- ❖ Waste disposal guidelines/procedures
- ❖ Emergency procedures
- ❖ MSDS Location
- ❖ After hours access procedures

