



Use Chemicals Safely
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FM Ireland IOSH March 2019



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Use chemicals safely.....

- Yes - You have chemicals
- Where, What, When,?
- Case Studies
- To Do



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YES – you have chemicals.....




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“any liquid, gas or solid that poses a risk to workers’ health or safety”


<https://osha.europa.eu/en/themes/dangerous-substances>



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steps to manage dangerous substances

- Identify hazards
- Assess exposure
- Set measures /controls




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CHEMICALS- Identification



Label

<https://hslearning.ie/>



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BUT



Further information

<https://www.hsa.ie/eng/Topics/Asbestos/>

<https://www.notimetolose.org.uk/>



WORKING TOGETHER TO BEAT OCCUPATIONAL CANCER



Not every chemical has a label

- Asbestos
- Carbon monoxide
- Diesel Engine Exhaust
- Respirable Crystalline Silica
- Welding Fume
- etc

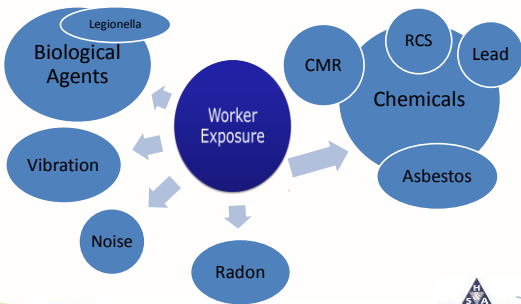


Hazards not identified

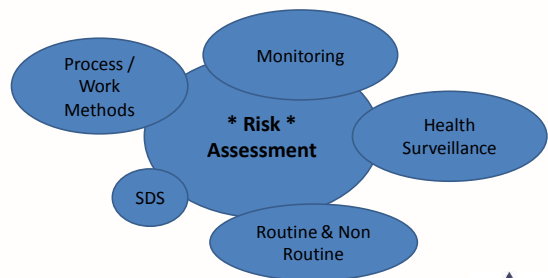
Appearance	Clear liquid, Liquid.
pH	Scientifically unjustified.
Melting point	Scientifically unjustified.
Initial boiling point and range	60°C @
Flash point	- 7°C
Evaporation rate	Scientifically unjustified.
Upper/lower flammability or explosive limits	Scientifically unjustified.
Vapour pressure	Scientifically unjustified.
Vapour density	Scientifically unjustified.
Relative density	0.85 @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	Scientifically unjustified.
Auto-ignition temperature	Scientifically unjustified.
Decomposition Temperature	Scientifically unjustified.



When the Inspector Calls.....



When the Inspector calls...Risk Assessment



Case Study A

Contractor is coming on site
What happens next?



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Case Study A

Contractor is coming on site
What happens next?

Question 1

Duties under the Safety, Health and Welfare at Work
(Construction Regulations) 2013 ?

https://www.hsa.ie/eng/Your_Industry/Construction/Construction_Duty_Holders/Client/



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Case Study 1

Contractor is coming on site to install fire detection and alarm system. The building has a series of small rooms, each of which will need be fitted with infrastructure. Attic access will also be required.



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Case Study 1

- Construction Regulations
- Review of risk assessment method statement
- Potential concerns
 - Asbestos (pipework insulation in attic, AIB ceiling tiles etc.) NB Asbestos Register!
 - Silica (boring walls)
 - Work at Heights
 - Noise etc.



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Case Study 2

Contractor is coming on site to install new flooring in canteen.



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Case Study 2

- Construction Regulations
- Review of risk assessment method statement
- Potential concerns
 - Asbestos (floor tiles, pipework underneath etc.) NB Asbestos Register!
 - Manual Handling
 - Noise
 - Glues / Adhesives
 - Curing / Hot melt / Fire
 - LUNCH etc.



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Case Study 3

Contractor on site carrying out repairs to stainless steel canopy in kitchen. They are using pickling paste to clean the weld. This splashes on the arm of one of the workers. Your First Aider is called to the scene. What should be in place?



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Case Study 3

- Construction Regulations
- Review of risk assessment method statement
- Is pickling paste needed?
- Safety Data Sheet
- Antidote available
- Personnel (users and responders) trained
- Emergency Plan known
- Other?



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Case Study 4

A contract cleaning company carried out the cleaning of your site. Their cleaning chemicals are delivered directly to your site and stored in various locations and trolleys throughout the site. The chemicals are diluted on site by cleaning staff.



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Case Study 4

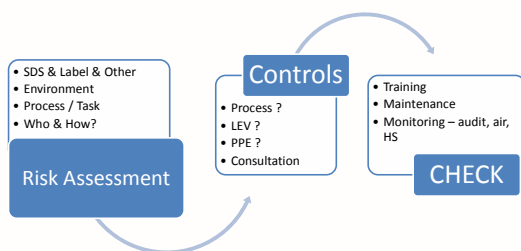
- Review of risk assessment method statement
- Who has control? Are cleaning chemicals specified by Company or Contractor?
- What chemicals are on site? What Quantities? Are they all needed? (Note: workplace uses 1 non hazardous chemical for all cleaning)
- Safety Data Sheets
- Emergency Plans

https://www.hsa.ie/eng/Publications_and_Forms/Publications/Healthcare_Sector/Safety%20in%20Contract%20Cleaning.51679.shortcut.html



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Risk Assessment Process



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Can you combine with other documents ?



- Cleaning Regime?
- SOP?
- NOP?
- Method Statement ?
- RAMS




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More relevant "risk assessment" Use of drill to bore holes for alarm cable

- Consider Task / Activity based
- Hazards - RCS, asbestos, Noise, ergonomic.....
- Risk of asbestos exposure, Silicosis, hearing loss, WRULD,
- Controls =






Information



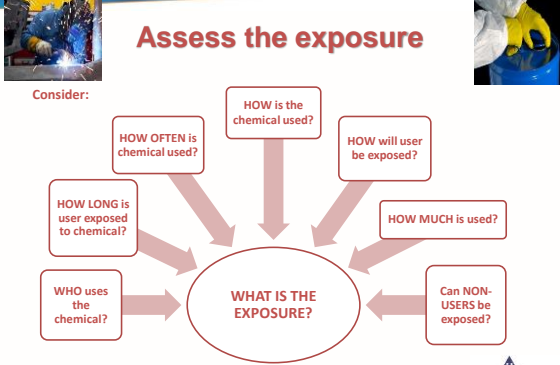

- Examples Include
 - Asbestos Survey
 - Incidents
 - Equipment Manuals
 - Maintenance Requirements
 - Regulatory Websites
 - Safety Alerts
 - Noise Survey (ototoxic)
 - Good Practice Guides
 - Etc....

Life Cycle Risk Assessment




Assess the exposure

Consider:

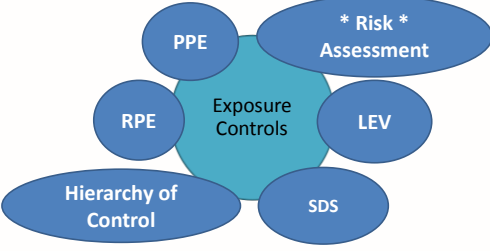




Chemical Storage

- A, B, C, DNO
- Safety Data Sheet – section 7 & 10
- Acid and Alkali corrosives – incompatible

Exposure Controls

What not to find...

- Controls must consider all hazards of the task so additional risks are not created and controls are compatible.
- Example – Dust control curtains to reduce spread of silica dust resulting in Carbon monoxide exposure
- Example - incompatible PPE



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Europe

- EU-OSHA - NAPO man
<https://www.napofilm.net/en/napo-s-films/napo-danger-chemicals> - The Napo series of films are produced in computer graphics. They feature characters in the world of work, faced with health and safety issues. There are several with chemical themes.
- [European Commission](#)
- [European Chemicals Agency](#)



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Roadmap on Carcinogens

- <https://roadmaponcarcinogens.eu/>
- <https://roadmaponcarcinogens.eu/solutions/good-practices/dust-free-working/>
- <http://www.dustfreeworking.tno.nl/>
- <http://www.hazchematwork.eu/>



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HSA

- www.hsa.ie
- www.besmart.ie <http://hsalearning.ie/> - courses here for small business- employers, employees, chemicals, Asbestos
- http://www.hsa.ie/eng/Topics/Simple_Safety/
- Newsletters
- Safe Supply, Use and Management of Chemicals - www.hsa.ie/chemicals
- Chemicals Helpdesk - chemicals@hsa.ie



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BOHS & IOSH

- <http://www.notimetolose.org.uk/>
- <http://www.breathefreely.org.uk/>

BREATHE FREELY



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Healthy Workplaces MANAGE DANGEROUS SUBSTANCES 2018-19



<https://healthy-workplaces.eu/en>



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Legislation

- Many of the above will refer to UK or other legislation so please download the full texts of the Irish legislation from www.irishstatutebook.ie. See:
- Safety Health and Welfare at Work Act, 2005
- Safety Health and Welfare at Work (General Application) Regulations, 2007
- Safety Health and Welfare at Work (Chemical Agents) Regulations 2001
- Safety Health and Welfare at Work (Chemical Agents) (Amendment) Regulations 2015
- Safety Health and Welfare at Work (Carcinogens) Regulations 2001
- Safety Health and Welfare at Work (Carcinogens) (Amendment) Regulations 2015
- Safety, Health and Welfare at Work (Construction) Regulations 2013
- Updates to Carcinogens and Mutagen Directive underway

The Health and Safety Authority wish to make it clear that only the Courts can interpret statutory legislation with any authority and this information is subject to revision in the light of further information.

Additional external sources of information are provided. The HSA is not responsible for, and cannot guarantee the accuracy of information on sites that it does not manage; nor should the inclusion of a hyperlink be taken to mean endorsement by the HSA of the site to which it points.



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To Do.....

- Do you have an Asbestos Register?
- Do you have a Chemical Inventory?
- Have you considered BREXIT?
- Do the risk assessments comply with the Chemical Agents Regulations?
- Do the controls follow the Hierarchy of Control?
- Do the controls work? How do you know?
- Are personnel trained on PPE?
- Are personnel fit tested for RPE?
- How do YOU manage Contractors?



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Thank you



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