



Draft Document:

FACT SHEET: THE CONTROL OF HAZARDOUS CHEMICAL SUBSTANCES, AN OVERVIEW



Why is the University introducing control measures for hazardous substance?

Hazardous Substances comprise one of the most important matters requiring risk control at the University. The purchasing, storage, handling, transporting, using and disposing of these hazardous substances are heavily regulated by a number of often complex statutory requirements. The legal obligation of the University is to ensure a healthy and safe working environment and by adopting a formal 'cradle to the grave' process of hazardous substance control, the University aims to reduce the risks of exposure necessary in order to comply with all relevant legislative acts, in this case those that cover Hazardous Substances.

Where are Hazardous Substances found at UCT?

Hazardous Substances are widely distributed throughout the university campus. From Research and teaching labs to Contract Cleaning Staff Storage Areas; Workshops /Paint spray booths to Stockrooms/storerooms; Shops to Swimming pools

Why (and who should) keep an inventory of Hazardous Chemicals?

In accordance with the requirements of the Occupational Health and Safety Act, all Departments, Divisions, Research Groups etc within the University of Cape Town **must** keep an inventory of Hazardous Substances held within the Department. This inventory will be a part of the overall departmental risk exposure profile and should be kept up to date.

What are the benefits to us for keeping a complete inventory?

Apart from complying with legislation and practising good laboratory management, keeping a regular inventory can be beneficial in a number of ways;

- Assists emergency response personnel, providing campus users with specific hazard and storage information
- By identifying what is actually present
- By checking for surplus hazardous substances and removing those that will not / have not been used for 1-3 years (these can be handed over to the university chemical exchange and re-use programme, saving on disposal costs).
- To be used as a chance to have a clean-up of containers, shelving and storage areas
- To be used as a chance to rectify improper or incompatible storage
- To remind users to dispose of sensitive chemicals before they become unsafe, exceed their shelf-life or become expensive to dispose of.
- By adding the information onto the inventory spreadsheet the person completing the spreadsheet is informing the University that they have knowledge of the hazardous nature of the chemical, and most probably have on record the MSDS of that Chemical. The possession of the MSDS is also a legal requirement.

What will the inventory form look like?

The form comes as a standard excel spreadsheet (see example below). If the information on the chemical is not known, it can probably be accessed on the MSDS (material safety data sheet) of the chemical. The possession of the MSDS is also a legal requirement. There are red flags on the spreadsheet where you can find help and hints.

CHEMICAL INVENTORY														
Name (if different to that of person who completed inventory) and contact number (include cell if possible) in case of emergency										Criteria set out in Management Guide Categorizing, Control Banding and Toxicological Scoring of Hazardous Substances		Date inventory compiled/ latest update		
Name	Name and Contact phone	Faculty	Building	Department	Group/Sector	Date completed								
Name of person completing inventory										Enter Dust; or powder; or vapour; or liquid; or gas; or metallic; or fume; or solid.				
Please check red flags for help/hints														
No.	PREFIX	IUPAC CHEMICAL NAME	COMMON NAME	CONCN / PERCENTAGE	S NUMBER and	FORMULA WEIGHT	HAZARD CATEGORY	PHYSICAL FORM	ROUTE OF ENTRY INTO BODY	ROOM / SHELF	STORAGE TEMP	DATE CHEMICAL PURCHASED / ACQUIRED	DATE OF EXPIRY OF CHEMICAL	QUANTITY IN STOCK
		name given by the International Union of Pure and Applied Chemistry		45%	000064-19-7	60.05	C3	liquid	Inh, ing, abs, eyes	427				5ml
3	Exd	CAS number is the Number allocated by the American Chemical Society Abstract Service and can normally be found on most MSDS. Nb first number, six digits required			000060-13-2	72.09	C3	liquid	Inh, ing, abs, eyes	318a		DDMMYYYY If Known		10µl
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Which hazardous materials must be inventoried under this program?

A hazardous material is any material that, because of its quantity, concentration, physical characteristics, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released.

Materials to report in a chemical inventory include, but are not limited to:

Laboratory chemicals: all laboratory chemicals including but not limited to: acids, bases, solvents, mercury, metallic salts, halogenated compounds, toxic substances such as lead compounds and acrylamide, mixtures of hazardous chemicals; **Compressed gas:** toxic gases, pressurized gas cylinders of pure gases or mixtures of gases; **Liquids under pressure:** liquid nitrogen, liquid oxygen, propane, aerosols, chlorofluorocarbon refrigerants (liquid/gas phases); **Paints and inks:** both water- and oil-based paints, spray paints, printing inks or pastes; **Solvents and spirits:** degreasers, kerosene, paint thinners; **Lubricants:** pump oil, hydraulic oil, motor oil, brake fluid, greases; **Finishes:** varnishes, shellacs, floor waxes, lacquers
Fuels: gasoline, camping fuel, diesel fuel; **Maintenance/structural materials:** asphalt-containing roofing, adhesives, and bonding agents; **Grounds/landscape materials:** fertilizers, plant food supplements, soda ash; **Pesticides:** insecticides, rodenticides, acaricides, fungicides, defoliants, herbicides; **Drugs:** pharmaceuticals; **Photographic materials:** developers, reducers, stabilizers, activators, fixers, stop bath; **Custodial materials:** cleaning agents, bleaches, floor strippers, soaps and detergents, disinfectants, corrosive products, ammonia.

(information from EHS Department: University of California, Berkeley, USA)

Note: Other hazardous materials, such as **biological agents and radioactive materials**, should not be included in the chemical inventory since they are covered by separate SHand E programmes.

Why do we have to enter so much information?

It may look like a lot of information, but in reality it looks more than there is. We basically want to know what we have, where it is, and approximately how much there is. It is a requirement of the Occupational Health and Safety Act 85 of 1993 to risk assess the substances that one will be using and the information requested is part of that requirement.

How often will we have to compile the inventory?

An updated inventory will be required every two years. However, the spreadsheet is designed so that it can be used as a way of keeping a running stock record.

- if there are any **significant changes** such as room relocations, new or dangerous chemicals added, or changes in names and phone numbers of key contacts, you must submit updates to the Environmental Risk Officer (ext 3487) within 30 days of the change.

What is the Hazard Category?

The hazard category is a method of assigning a code to a chemical that can be recognised throughout the University. It is a method of showing not only if a substance is harmful but also how harmful a substance is. There are two pieces of information required; the substances **Danger Category** and the **Hazard Severity Level**. The **Danger category** indicates the **type** of harm. The **Hazard Severity Level** is an indication of the **seriousness** of the harm caused by exposure to the substance.

The information required to assign the Hazard Category will be found on the MSDS. Assigning the Hazard Category will be an indication that the department/section/group have accessed the necessary information and have risk assessed the substance.

Where do I find more information regarding the control of hazardous substances at the University of Cape Town?

- All hazardous substances purchased and supplied to the University must be properly labelled. When first purchased, a material safety data sheet must accompany the substance. [*Policy Document – The Control of Hazardous Substances and Guidance Note- Material Safety Data Sheet, Occupational Health and Safety Act 85 of 1993*].
- All hazardous substances must be given the appropriate hazardous categorisation. [Fact sheet (full version) and *Policy Document – The Control of Hazardous Substances and Management Guide – Control Banding and Toxicological Scoring*].
- An inventory must be kept on all hazardous substances (*Policy Document – The Control of Hazardous Substances and Occupational Health and Safety Act 85 of 1993*)
- The storage of the hazardous substances must be appropriate to the hazardous properties. [*Policy Document – The Control of Hazardous Substances and Management Guide – Safe Storage of Chemicals, Occupational Health and Safety Act 85 of 1993*].
- The handling, transport and use of any hazardous substance must be risk assessed prior to any of these activities. Any required control measures must be implemented. [*Policy Document – The Control of Hazardous Substances, Policy – Hazardous Substances; Policy – Basic Code of Laboratory Conduct, Occupational Health and Safety Act 85 of 1993*].
- The disposal of any hazardous substance must be by the proper disposal route. [*Policy Document – The Control of Hazardous Substances and University Policies and Guidelines on Hazardous Waste Disposal, National Environmental Management: Waste Act, Act 59 of 2008*].
- All persons involved in the purchase, storage, handling, transport, use and disposal of hazardous substances must be given appropriate training, information and instruction. [*Policy Document – The Control of Hazardous Substances, Occupational Health and Safety Act 85 of 1993*].