**Hazardous Substances Policy - Assessment**

**CHEMICAL HAZARD AND RISK ASSESSMENT**

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| School/Dept |  |  | Assessment Number |  |
|  |  |  |  |  |
| Assessor |  |  | Date of Assessment |  |

Notes Guidance on making an assessment is given in *Chemical Hazard and Risk Assessment (GUIDANCE/22/CHRA/05)*.

Guidance is also available from the attached *Guidance on Completing the Chemical Hazard and Risk Assessment Form*.

Substance data is available in HAZDAT. Use a continuation sheet or word processor to expand any section of this form.

An *MS Word* file for this form is available from http://www.hsu.bham.ac.uk/univ/hspolicy/hs15/HS2ASSFM.DOC.

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| **1** |  | **LOCATION OF THE WORK ACTIVITY** |  |  |
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| **2** |  | **PERSONS WHO MAY BE AT RISK** | |
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| List names where possible | | |  | | |
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| **3** |  | **ACTIVITY ASSESSED** |  |  |
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| **4** |  | **MATERIALS INVOLVED** | | Attach copies of data sheet(s) | | | |
|  |  |  | | | |  | |
| NAME and CAS NUMBER | | | AMOUNT and FORM | | HAZARD | | RISK PHRASES / HAZARD STATEMENT | | REPORTABLE? |
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**If substance is reportable, have you reported it to the Health and Safety Unit? YES/NO** (see Note 4)

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| **5** |  | **INTENDED USE and JUSTIFICATION (where appropriate)** |
|  |  |  | | |  |
| Give brief details and attach protocol/instructions. Justification is needed for exceptionally hazardous substances(see Note 5) | | | |  | | |
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| **6** |  | **RISKS to HEALTH and SAFETY from INTENDED USE** | |
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| From personal exposure or hazardous reactions. Refer to WELs, flash points, etc., as appropriate. Are pregnant women, breast-feeding mothers especially at risk? | | | | | |
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| **7** |  | **CONCLUSIONS ABOUT RISKS** | |
|  |  |  | | |  |
| Is level of risk acceptable? Can risk be prevented or reduced by change of substance/procedure? Are control measures necessary? | | | | | | | |
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| **8** |  | **CONTROL MEASURES** |
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| Additional to *Good Chemical Practice*, e.g., fume cupboard, etc. Any special requirements, e.g., glove type, etc. | | | | | | |
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| **9** |  | **INSTRUCTION/TRAINING** |
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| Specify course(s) and/or special arrangements. | | | |  | |
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| **10** | |  | | **MONITORING** | |
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| Performance of control measures, | | | | | | |  | | | | | |
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| Personal exposure | | | | |  | | | | Health Surveillance, specify measures agreed with Occupational Health Unit | |  |
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| **11** | |  | | **WASTE DISPOSAL PROCEDURE** | |
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| Include name, 6-digit code and H numbers if to be sent away for disposal | | | | | | |  | |
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| **12** | |  | | **REVIEW** |
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| Enter the date or circumstances for review of assessment (maximum review interval 5 years) | | | | | | |  | |
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| **13** | |  | | **EMERGENCY ACTION** | | |
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| **TO CONTROL HAZARDS** | | | | | To stabilize situation eg spread absorbent on liquid spill; eliminate sources of ignition, etc. | | | | | | | |
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| **TO PROTECT PERSONNEL** | | | | | | Evacuation, protection for personnel involved in clean-up, Special First Aid | | | | |  | |
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| **TO RENDER SITE OF EMERGENCY SAFE** | | | | | | | | | Clean-up/decontamination |  | | |
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| **14** | |  | | **EMERGENCY CONTACT** | | NAME |  | PHONE |  |
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**Guidance on Completing**

**the Chemical Hazard and Risk Assessment Form**

**1 Location of the Work Activity**

The location of an activity can significantly alter risk. Different levels of risk may arise from the same activity performed in different locations if there is also a difference in the standards of facilities of the locations.

**2 Persons Who May be at Risk**

In some cases individuals will be named in this section. In other cases it will be more appropriate to refer to groups of people such as cleaning staff, an undergraduate class.

**3 Activity Assessed**

Identify the activity by an appropriate title.

**4 Materials Involved**

**Name and CAS Number** Identify a product by its proprietary name followed by a listing of the constituent chemicals. Include the CAS numbers for individual chemicals.

**Amount and Form** Specify the quantity of substance used and or concentration and whether gas, liquid, granules, powder, dust, etc.

**Hazard** The word(s), such as "Oxidizing" or "Toxic", associated with the hazard warning symbol(s) on the container label.

**Risk Phrases/Hazard Statements** The further details of the nature of the risk, such as "Toxic by inhalation", which appear on the container label.

Labelling information and other substance properties, including the effect of dilution on hazard classification, may also be found in the University’s HAZDAT database.

**Reportable**  Certain substances are prohibited under COSHH, Chemical Weapons Convention, or controls on Ozone Depleting Substances. Health surveillance is compulsory for certain other substances. These substances must all be reported to the Health and Safety Unit/Occupational Health Unit. Such substances are identified in HAZDAT. All work with carcinogens, sensitisers and nanomaterials must be reported to the Occupational Health Unit.

Attach copies of data sheets to the assessment form.

**5 Intended Use and Justification**

Describe the activity in outline, but include details such as quantities, durations, etc. which will assist in the assessment of risk. If the activity follows an official, approved or standard procedure or undergraduate course script, etc. cite references and attach copies of protocols/procedures to the assessment form.

The law requires the reasons for not substituting a less hazardous substance for an exceptionally hazardous substance to be included in the assessment. Exceptionally hazardous substance includes carcinogens, mutagens, asthmagens and highly and spontaneously reactive substances

**6 Risks to Health and Safety from Intended Use**

List here only the harmful or hazardous effects that could arise from the intended use. Also note factors such as quantity, physical properties (e.g., evaporation rate), exposure limits, vapour concentrations, flash points, toxicity data, etc. which will influence the conclusions made about the risks that may arise from the activity and from foreseeable emergencies. Are pregnant women, breast-feeding mothers especially at risk?

**7 Conclusions About Risks**

Is the level of risk acceptable? Can any risks be eliminated or reduced by not using a particular substance or procedure or by substituting lower risk alternatives? Are further controls necessary? The HSE require sufficient detail to be recorded for it to be clear how conclusions about risk were arrived at.

**8 Control Measures**

List measures in addition to Good Chemical Practice such as working practice, enclosed equipment, fume cupboard, personal protective equipment, prohibitions on sources of ignition, etc., which are not detailed in section 4. Where appropriate, specify class of equipment, type of material, level of performance, etc. (see Hazardous Substances Policy Schedule 3:

S3.1 - Control Measures, Good Chemical Practice:

S3.2 - Control Measures, Criteria for Enhanced Good Chemical Practice

S3.3 - Control Measures, Enhanced Good Chemical Practice for Work with Chemical Carcinogens:

S3.4 - Control Measures, Enhanced Good Chemical Practice for Work with Cyanides

S3.5 - Control Measures, Enhanced Good Chemical Practice for Work with Hydrogen fluoride and Hydrofluoric Acid:

S3.6 - Control Measures, Enhanced Good Chemical Practice for Work with Phenol

S3.7 - Control Measures, Enhanced Good Chemical Practice for Peroxidisable Substances

S3.11 - Control Measures, Recirculating Filtration Fume Cupboards]

S3.12 - Control Measures, Enhanced Good Chemical Practice for Work with Very Low Boiling Point Liquefied Gases

S3.13 - Control Measures, Recommendations for Using Fume Cupboards

If measures are entirely in accordance with requirements in Schedule 3, then simply specify the schedule number.

**9 Instruction/Training**

Specify a Health and Safety Unit course or any other course or special arrangements.

**10 Monitoring**

"Performance of Control Measures" Specify the testing that will be required and its frequency. (E.g., see Hazardous Substances Policy Schedule 3

S3.9 - Control Measures, Procedures for Fume Cupboard Maintenance

S3.11 - Control Measures, Recirculating Filtration Fume Cupboards

S3.12 - Control Measures, Enhanced Good Chemical Practice for Work with Very Low Boiling Point Liquefied Gases

"Personal Exposure" If the work will cause people to be exposed to a substance, and either it is not known whether the exposure will be excessive or exposure is expected to be close to the limit, personal monitoring must be specified The type and frequency of monitoring, agreed with the University Health and Safety Unit should be specified.

"Health Surveillance" Some form of health surveillance is mandatory for specified activities or work with certain substances and if it is believed likely that exposure may give rise to observable health effects (See Hazardous Substances Policy Schedule 4).

Relevant examples of substances for which health surveillance is required:

* Substances of recognised systemic toxicity (e.g. carcinogens, substances labelled "may cause cancer" or "may cause cancer by inhalation" (see Hazardous Substances Policy Schedule 3.3 for further identification of carcinogens) or heavy metals such as lead, cadmium)
* Substances labelled "May cause sensitisation by inhalation" and other substances known to cause occupational asthma
* Substances labelled "May cause sensitisation by skin contact" and other substances known to cause severe dermatitis.
* Soldering using rosin flux

Many of these substances are identified in the University's HAZDAT database.

Details should be given of appropriate Health Surveillance after consultation with the Occupational Unit.

**11 Waste Disposal Procedure**

Give details, or refer to approved procedure (see Hazardous Substances Policy Schedule 7), such as the University's Hazardous Waste (identify the category) disposal arrangements, if appropriate. If waste is to be sent away for disposal give substance name, H numbers and 6 digit waste code. ( See also Hazardous Waste Guidance on Assessment, GUIDANCE/11/HWGA/05)

**12 Review**

Specify the foreseeable event, change of circumstances, change of substance, that could invalidate the original assessment and give cause for review. The maximum review interval is 5 years.

**13 Emergency Action**

The details given here must be compatible with the department's emergency plan. The appropriate persons must be notified if the effects of a potential incident are likely to spread beyond the laboratory and/or building.

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