**DSEAR Risk Assessment**

The Dangerous Substances and Explosive

Atmospheres Regulations 2002

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assessment No: | | |  | | | | | Date of assessment: | | | | |  | | | | | | | | | | | | | | | |
| Name of Assessor: | | |  | | | | | Date Review Required: | | | | |  | | | | | | | | | | | | | | | |
| Name of Service Manager: | | |  | | | | | In cooperation with: | | | | |  | | | | | | | | | | | | | | | |
| Team: | | |  | | | | | Location: | | | | |  | | | | | | | | | | | | | | | |
| Other documentation relevant to this assessment: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Has the requirement to use a Dangerous Substance been investigated and considered necessary? | | | | | | | | | | | | | | | | Yes | | | | |  | | No | | | | |  |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If No, can the dangerous substance be replaced for a less hazardous substance, or different work process which eliminates or reduces the risk? | | | | | | | | | | | | | | | | Yes | | |  | | | | | No | | | |  |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| If the hazard information contained within the Material Safety Data Sheet, COSHH assessment, or on the labelling on the product packaging denote that the product is (tick box as appropriate): | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Explosive | | | |  | Oxidising | | | |  | | Extremely Flammable | | | | | | | | | | | | | |  | | | |
| Highly Flammable | | | |  | Flammable | | | |  | | or, has a flash point lower than 32°C | | | | | | | | | | | | | |  | | | |
| If a substance is produced as a result of an in-house process, or as a bi-product of such a process, is that substance (tick box as appropriate): | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Explosive | | | |  | Oxidising | | | |  | | Extremely Flammable | | | | | | | | | | | | | |  | | | |
| Highly Flammable | | | |  | Flammable | | | |  | | or, has a flash point lower than 32°C | | | | | | | | | | | | | |  | | | |
| or, that release of vapour/gas may produce an explosive atmosphere | | | | | | | | | | | | | | | | | | | | | | | | |  | | | |
| **If none of the boxes above has been ticked, you may terminate the risk assessment at this point, otherwise continue:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Product / substance details | | | | | | | | | | Flammable Limits (in air) | | | | | | | | | | | | | | | | | | |
| Product / substance details | | | | | | | Quantity involved | | | Lower Explosive Limit (LEL) (%) | | | | | Upper Explosive Limit (UEL) (%) | | | | | | | | | | | | | |
|  | | | | | | |  | | |  | | | | |  | | | | | | | | | | | | | |
|  | | | | | | |  | | |  | | | | |  | | | | | | | | | | | | | |
|  | | | | | | |  | | |  | | | | |  | | | | | | | | | | | | | |
|  | | | | | | |  | | |  | | | | |  | | | | | | | | | | | | | |
|  | | | | | | |  | | |  | | | | |  | | | | | | | | | | | | | |
| Note here how a work system, or activity could fail and give rise to fire or explosion, also note any sources of ignition: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Control measures**  Where appropriate to the nature of the activity or operation | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1** | | **Process/Activity** | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | **N/A** | | |
| 1.1 | | Has the quantity of the dangerous substance held/used been reduced to a minimum? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.2 | | Have steps been taken to avoid, or minimise releases (intentional or unintentional)? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.3 | | Have steps been taken to control releases at source? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.4 | | Have steps been taken to prevent the formation of an explosive atmosphere? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.5 | | Have steps been taken to collect, contain and remove any releases to a safe place (e.g. by ventilation)? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.6 | | Have steps been taken to avoid adverse conditions (e.g. Exceeding the limits of temperature or other control settings)? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.7 | | Are incompatible substances kept apart in storage and, so far as is practicable, in use (e.g. oxidisers and combustibles)? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.8 | | Have the number of employees exposed to the dangerous substances or explosive atmosphere been reduced to the minimum? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.9 | | Has plant been supplied that is explosion resistant? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.10 | | Is explosion suppression or relief provided on equipment? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.11 | | Have adequate measures been taken to control or minimise the spread of fire, or explosion? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| 1.12 | | Has suitable Personal Protective Equipment (PPE) been provided, and have operatives been trained how to wear it correctly? | | | | | | | | | | | | | | |  | | | | |  | | | |  | | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **2** | | **Workplace/process and management system** | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | | **N/A** | |
| 2.1 | | Is the workplace designed, constructed and maintained so as to provide adequate fire resistance and/or explosion relief? | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.2 | | Is any assembly, construction, installation, rig, plant, equipment, protection system, etc., designed in such a manner as to minimise risk of fire and/or explosion? | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.3 | | Have appropriate safe systems of work, or other required procedural systems of organising work, been developed and communicated to the workforce, either by way of this form or another document? | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.4 | | Is a permit to work scheme required for working with the substance(s), or in the work area, and are these strictly enforced? | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| In the case of explosive atmospheres  (if not applicable tick here and proceed to storage) | | | | | | | | | | | | | | | | | | | | | | | | | | |  | |
| 2.5 | Have all such areas been classified into zones in accordance with Schedule 2 to the Regulations? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.6 | Where necessary have such classified zones been marked at their entry points with the specified ‘EX’ hazard warning sign? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.7 | Are all areas classified into such zones appropriately protected from sources of ignition, through the selection of equipment and protective systems compliant with the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 1996? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.8 | Are employees working in zoned areas provided with clothing that does not create a risk of electrostatic discharge? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 2.9 | Have areas where explosive atmospheres may be present, before their first operation, been verified as being safe by a person, or organisation competent in the field of explosion protection? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3** | **Storage** | | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | | **N/A** | |
| 3.1 | Are all flammable substances kept in suitable fire-resistant storage and are all quantities in excess of 50ltrs kept in dedicated and appropriately protected flammable stores? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 3.2 | Are all petroleum spirits, or derivatives thereof, in excess of 50ltrs kept in dedicated and appropriately protected petroleum spirit stores? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 3.3 | Are incompatible substances stored apart (e.g. flammables, oxidisers, combustibles, flammable gases, LPG)? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 3.4 | Where appropriate have storage areas been designed to provide explosion relief/resistance? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4** | **Emergency Procedures** | | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | | **N/A** | |
| 4.1 | Have suitable emergency procedures been developed and communicated to the workforce to deal with adverse process conditions (e.g. exceeding limits of temperature, or other control settings)? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 4.2 | Have suitable emergency procedures been developed and communicated to the workforce to deal with fire and evacuation? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 4.3 | Have suitable emergency procedures been developed and communicated to the workforce to deal with the spillage of dangerous substances? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **5** | | **Waste Disposal** | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | | **N/A** | |
| Have suitable procedures been developed, communicated to the workforce and implemented to deal with the safe transport and disposal of dangerous substances? | | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **6** | **Information, instruction & training** | | | | | | | | | | | | | | | | **Yes** | | | | | **No** | | | | | **N/A** | |
| 6.1 | Has appropriate information, instruction and training, commensurate with the hazard potential of the dangerous substances, or process, been provided to the workforce as regards; product detail, hazard, risk reduction methods to be employed, management systems to be followed, emergency systems, etc.? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| 6.2 | Are only trained and competent persons involved in work with dangerous substances? | | | | | | | | | | | | | | | |  | | | | |  | | | | |  | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Note:** Where any question relevant to a dangerous substance being used, produced, handled or stored has **returned a “No” response**, the subject area should be revisited to ensure that all required and reasonably practicable risk reducing measures have been implemented. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **7.** | **Conclusion** | | | | | | | | | | | | | | | | | **Yes** | | | | **No** | | | | **N/A** | | |
| The risk(s) from the hazard potential of the dangerous substances and/or explosive atmospheres identified in this risk assessment must be reduced to the lowest level reasonably practicable, are you satisfied that this is the case? | | | | | | | | | | | | | | | | | |  | | | |  | | | |  | | |
| Comments: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Actions arising | | | | | | | | | | | | Duty Holder (s) | | | | | | | | Date for competition | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
|  | | | | | | | | | | | |  | | | | | | | |  | | | | | | | | |
| **Safe System of Work**  To be communicated to the relevant workforce | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| As a result of risk assessment of the work process involving the following dangerous substance(s): | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| The following safe system of work (rules of work) must be observed and adhered to at all times; this includes handling, storage and ability, in the form that they present in the work situation, to result in an explosive atmosphere, the following safe system of work (rules of work) must be observed and adhered to at all times. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Note:** In the event of an emergency situation, actions laid out in the safe system of work that are designed to minimise damage to equipment or property should **only be undertaken if this does not put yourself or others at significant risk**, personal safety and that of others must take priority. | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Sign-off** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **I have read and understood the above safe system of work.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name (Print)** | | | | | | **Signature** | | | | | | | | **Date** | | | | | | | | | | | | | | |
|  | | | | | |  | | | | | | | |  | | | | | | | | | | | | | | |
|  | | | | | |  | | | | | | | |  | | | | | | | | | | | | | | |
|  | | | | | |  | | | | | | | |  | | | | | | | | | | | | | | |
|  | | | | | |  | | | | | | | |  | | | | | | | | | | | | | | |