



Control of Workplace Hazardous Material



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Title:	CONTROL OF WORKPLACE HAZARDOUS MATERIAL
Number:	CSBP-GM-11-037-05
Version Number:	11.0.0
Date Revised:	31 October 2017
Owner:	Andrew Bass
Authoriser:	Melanie Jensen
Reasons for Creating or Amending Document:	New or Amended Process; Full Review of Document
Actual Change Details:	Full review of document. New chemical approval and chemical management process. Changes to current management and storage of safety data sheets and MSDS changed to SDS throughout.



Control of Workplace Hazardous Material



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1. INTRODUCTION

This guide manual describes the system of control to be followed, to minimise any health risk to employees and others or the environment from hazardous materials and chemical products either manufactured or used by CSBP Limited personnel.

It is a requirement of the Occupational Safety and Health Regulations 1996 that materials in use must be assessed for their hazards and adequate information is supplied for the appropriate site risk management to be performed. Figure 1 outlines this process.

2. DEFINITIONS

ChemAlert: is the chemical management system adopted by CSBP for management and inventory of approved site Safety Data Sheets.

Dangerous Good: is one that is prescribed by the Australian Dangerous Goods Code and is symbolised by a Class ranking within the SDS and ChemAlert.

NICNAS: National Industrial Chemicals Notification and Assessment Scheme – it was established in July 1990 under the *Industrial Chemicals (Notification and Assessment) Act 1989* (the Act). NICNAS aids in the protection of the Australian people and the environment by finding out the risks to occupational health and safety, to public health and to the environment that could be associated with the importation, manufacture or use of industrial chemicals, and by maintaining a national standard for cosmetic products.

Hazardous material: is one possessing a classification under the NOHSC criteria and which possess any of the following characteristics:

- toxicity,
- corrosive or reactive state,
- human sensitivity, and/or
- explosive or combustible state

Requesting Officer: is the CSBP Team Leader or the Responsible Officer requesting to bring chemicals on site.

3. CONTROL

Control of hazardous materials and products is accomplished by:

- a. Maintaining a register of chemical products / materials manufactured or used by CSBP.
- b. Assessing the risk to the user and the environment, of all materials and chemical products, prior to their use in the workplace.
- c. Maintaining a database, containing a list of materials and chemical products used, Safety Data Sheets (SDS), and a risk-to-user assessment in all sections.
- d. Identifying and implementing approved methods of use and storage of materials and chemical products, and ensuring compliance with these methods.

- e. Having an SDS that is compliant with the National Code of Practice for the [Preparation of Safety Data Sheets for Hazardous Chemicals](#), (Safe Work Australia, 2016) for all hazardous material and products.
- f. Having a purchasing process that will only allow materials and products to be purchased, after an SDS (in appropriate format) has been provided, and the NICNAS register is checked to ensure the chemical is authorised to be imported or manufactured in Australia, and a prepared risk-to-user assessment made with the suitability of the purchase agreed upon.

Note: All chemicals imported/manufactured in Australia must be registered with NICNAS (all new chemicals not listed on AISC must be notified to NICNAS & assessed prior to import or manufacture this could take several months).

<http://www.nicnas.gov.au>

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- g. Assessing the potential Dangerous Goods Licencing implications of all materials and chemical products, prior to their use in the workplace
 - h. Minimising the use, and storage of hazardous chemicals.

4. PROCEDURE FOR INTRODUCING A NEW CHEMICAL PRODUCT / MATERIAL INTO THE WORKPLACE

Before any new chemical product / materials are introduced into the workplace, the following procedure shall be followed:

4.1 REQUESTING OFFICER

- a. Logs into ChemAlert and searches if the chemical is already approved for use on site. If the chemical is already approved, the material will show a stock status of 'approved' in ChemAlert. If approved the material may be used on site.

Note: Information on how to search for approved products in ChemAlert is available through the following link: [Search for Approved Products](#)

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- b. If the chemical is in ChemAlert but does not show as approved or the chemical cannot be located in ChemAlert, a new chemical request must be completed.
 - c. Obtains a SDS from the supplier or the ChemAlert data base, for the new proposed chemical product / material. The Supply Department assists the Requesting Officer where necessary.

Note: SDSs must be compliant with the National Code of Practice for the [Preparation of Safety Data Sheets for Hazardous Chemicals](#) (Safe Work Australia, 2016)

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- d. Logs into ChemAlert and completes a chemical request. This is completed by clicking the 'request' tab and then the 'new' tab.
 - e. Locates the chemical SDS in ChemAlert under 'lookup' and selects the appropriate chemical to request. Where the chemical is not located in lookup the chemical name is to be entered into the 'name' field manually.
 - f. Completes all available fields in the first three tabs (Product details, Request Details and Product Use) of the chemical request and clicks 'Save'.

Note: Information on how to create a new chemical request in ChemAlert is available through the following link: [Create a Chemical request](#)



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- g. Where the chemical SDS is not located in the ChemAlert data base for the request the manufacturers SDS must now be uploaded as a reference file in the 'product details' tab.
- h. Once saved the chemical can be submitted for approval by clicking the 'Submit' tab on the chemical request.
- i. Once the request has been submitted, follow the prompts in the 'Email Chemical Request' to 'Open email client' and send the email to advise the chemical approvers of the new chemical request
- j. The request will be submitted to Hygiene and Environmental Advisors for approval and authorisation.
- k. Once approval has been given, the requestor will be notified via email and the chemical will show a stock status of 'Approved' in ChemAlert.
- l. If the chemical is not available on ChemAlert a request is sent to ChemAlert support to have the chemical added to the database. Once added by ChemAlert the chemical is marked as approved on the database.
- m. All approvals that are conducted through ChemAlert will be held in the ChemAlert data base and can be accessed at any time.

Note: The disposal of unwanted materials or products is arranged by the appropriate Team Leader through the Environmental Department. Approved methods of disposal for the various materials will be determined in conjunction with the health and Safety Department.

4.2 HYGIENE ADVISOR

- a. Receives an email detailing that a chemical request has been submitted through ChemAlert
- b. Logs into ChemAlert and Reviews the request
- c. Access the NICNAS website <http://www.nicnas.gov.au> and ensure that the chemical is registered, ensure the ingredients that make up the chemical are also registered record the CAS#(s)
- d. Assesses if the material is a Dangerous Good (DG). If the material is a DG, forwards to Process Safety for additional approval
- e. Using the safety risk assessment detailed in section 5.1, assesses the risk of the chemical use on site

1. If the chemical is risk ranked **LOW**, for Safety, approval is given in the assessment details of the chemical request in ChemAlert.

If a significant number of issues are raised the risk ranking may be altered and the approval process will be elevated to the **MEDIUM** or **HIGH** processes.

2. If the risk is ranked **MEDIUM**, the hygiene advisor will add safety comments to the assessment details of the approval for the requestor to follow when using the material.
3. If the risk is ranked **HIGH** the hygiene advisor will contact the requester directly to discuss the material and risk associated with its use. The hygiene advisor will ensure the material being used is the safest option and request an additional risk assessment before approving its use and storage.

Note: If the product is not suitable for purchase the chemical request will be declined with an explanation of why the material or product is not suitable for purchase.

- f. Once the Chemical has received approval from the hygiene advisor:
 1. The chemical request will have a status of approved, with date of approval and any comments relating to the required safe use of the material.
 2. Once all approvals have been given by the required departments (environmental and process safety if required), authorises the chemical use on site.
 3. Arranges for the material or product name to be placed on the register.
 4. If the product is not available on ChemAlert a request is sent to ChemAlert support to have the material SDS added to the register.

4.3 ENVIRONMENTAL ADVISOR

- a. Receives an email detailing that a chemical request has been submitted through ChemAlert
- b. Logs into ChemAlert and Reviews the request
- c. Using the environmental risk assessment detailed in section 5.1, assesses the risk of the chemical use on site

1. If the chemical is risk ranked **LOW**, for Environment, approval is given in the assessment details of the chemical request in ChemAlert.

If a significant number of issues are raised the risk ranking may be altered and the approval process will be elevated to the **MEDIUM** or **HIGH** processes.

2. If the risk is ranked **MEDIUM**, the Environmental Advisor will add Environment comments to the assessment details of the approval for the requestor to follow when using the material.

3. If the risk is ranked **HIGH** the Environmental Advisor will contact the requester directly to discuss the material and risk associated with its use. The Environmental advisor will ensure the material being used is the most appropriate option and request an additional risk assessment before approving its use and storage.
- d. If necessary, discusses any storage or usage recommendations associated with the new chemical with the Team Leader of the area.
- e. If required, arranges for disposal of the material that the new chemical is replacing with the Team Leader of the area.
- f. Notify the Environmental Reporting Systems Coordinator of new chemical, to be added to the NICNAS New Chemicals Obligation list.
- g. Once the Chemical has received approval from the Environmental advisor:
 1. The chemical request will have a status of approved, with date of approval and any comments relating to the required safe use of the material.
 2. Contacts the hygiene advisor to notify of approval

4.4 PROCESS SAFETY ADVISOR

- a. Receives an email detailing that a chemical request has been submitted through ChemAlert and assesses the form for impact (and amends if required) the:
 1. Dangerous Goods Licence
 2. Dangerous Goods Manifest
 3. Dangerous Goods Emergency Services Site Plan

4.5 SUPPLY DEPARTMENT

- a. Assists the Requesting Officer obtain a SDS from the Supplier.
- b. Orders the requested product or material if approved.

Note: The Supply Department **MUST** be able to see that the material has a stock status of 'approved' in ChemAlert or have authorisation from the Hygiene Advisor before purchasing the product or material.

5. DETERMINING THE POTENTIAL RISK TO THE USER

Factors which determine the risk to the user include the chemical hazard, the quantity used, frequency of use and the working environment.

Note: The use of the following materials on the work site is prohibited and/or restricted:

- asbestos products,
- polychlorinated biphenyls (PCB's),
- ozone depleting substances (ODS) for example, chlorofluorocarbons and halons,
- isocyanates.

The system for determining the risk to the user is as follows:

- a. Review the data provided in the *chemical request* from ChemAlert for the materials to be assessed.
 - b. Determine if the ingredients include any of the following ;
 - asbestos products,
 - benzene,
 - cadmium,
 - inorganic arsenic,
 - inorganic chromium,
 - inorganic mercury,
 - isocyanates,
 - lead,
 - hydrogen fluoride
 - ozone depleting substances (ODS for example, chlorofluorocarbons and halons,
 - polychlorinated biphenyls (PCB's),
 - styrene,
 - others as specified in the Occupational Safety and Health Regulations 1996
-

Note: These materials have special conditions for use or for monitoring that are detailed in the above regulation.

- c. Determine the risk assessment for Safety Risk categories, based on Section 5.1 Table 2.

5.1 SAFETY RISK ASSESSMENT

The safety risk assessment considers the safety and hygiene aspects of the proposed chemicals use, and the risk of its implementation to the user and the workplace. The areas of assessment have been allocated a score and have been broken down into the categories defined in Table 1.

Chemical Hazard	This is a designated hazard ranking given to the chemical through ChemAlert. <i>Note:</i> If the chemical is not hazard ranked in ChemAlert, the assessment is to be based on the major ingredient in the chemical and / or similar chemical compositions.
Frequency of Use	This category determines the exposure hazard to the user.
Amount Used	This category determines the exposure hazard to the user and the storage requirements for the chemical.
Physical Properties	This category determines the potential for a safety hazard to occur, and should consider chemical compatibilities, along with the physical characteristics of the chemical.
Work Environment	This category considers the space in which the chemical is to be used and the potential exposure hazards to the user.

Table 1 – Safety Risk Categories

Safety Risk	High	Medium	Low
Chemical Hazard designation from ChemAlert	Red	Amber	Green
Score	14	10	2
Frequency of Use	Daily or more frequent	Up to weekly	Greater than weekly, including one use.
Score	3	2	1
Amount Used - each time	Greater than 2 litres/ kg.	Less than 2 kg or 2 litres.	Less than 500 g or 500 ml.
Score	3	2	1
Physical Properties <ul style="list-style-type: none"> • volatility • sizing • potential for contact • pipette use etc 	<ul style="list-style-type: none"> • high volatility, very fine dust, • lots of potential contact 	<ul style="list-style-type: none"> • moderate contact possible 	<ul style="list-style-type: none"> • not volatile, • very limited contact
Score	3	2	1
Work Environment <ul style="list-style-type: none"> • ventilation • workplace conditions • lighting • atmospheric /air conditions etc 	<ul style="list-style-type: none"> • poor ventilation, • congested work space, • poor lighting 	<ul style="list-style-type: none"> • adequate work area, • outside work next to a building 	<ul style="list-style-type: none"> • good ventilation, • mechanically forced ventilation e.g. fume hood, • good lighting, • good space to work, • outside work unrestricted.
Score	3	2	1

Table 2 - Safety Risk Assessment

To calculate the Safety Score use the Safety Risk Assessment Table 2 and determine the score for the five (5) factors as per the example in Table 3.



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EXAMPLE:

Safety Risk	Category	Score	Justification
Chemical Hazard	High	14	Red Chemical - Sulphuric Acid
Frequency of Use	Medium	2	Used once a week
Amount Used	Low	1	Small amount used for lab processes
Physical Properties	Medium	2	Moderate risk of contact through handling
Work Environment	Low	1	Laboratory environment- fume hood used
Total		20	RISK = MEDIUM

Table 3 – Example Safety Score

SCORE	RISK RATING
21 to 26	HIGH
13 to 21	MEDIUM
6 to 12	LOW

Table 4 – Potential Risk to User

6. DETERMINING THE POTENTIAL RISK TO THE ENVIRONMENT

Factors that determine the risk to the environment include the environmental hazard, the quantity used, frequency-of-use, the physical properties and the working environment.

The system for determining the risk to the environment is as follows:

- a. Review the data provided in the *chemical request* from ChemAlert for the materials to be assessed.
- b. Determine if the ingredients include any characteristics which may result in additional monitoring to the environment (air and water specifically) or has any implications to the regulatory licences.
- c. Determine the risk assessment for Environmental Hazards, based on Section 6.1 Table 6.

6.1 ENVIRONMENTAL RISK ASSESSMENT

The environmental risk assessment considers the environmental aspects of the proposed chemicals use and the risk of its implementation to the environment. The areas of assessment have been allocated a score and have been broken down into the categories defined in Table 5.

Chemical Hazard	This is determined by the chemicals ecotoxicity (retention in the environment) and whether it is controlled under legislation or monitored.
Frequency of Use	This category determines the exposure hazard to the user and environment.
Amount Used	This category also determines the exposure hazard to the user and environment and also the storage requirements for the chemical.
Physical Properties	This category determines the potential for an environmental hazard or release to occur, and should consider the physical characteristics of the chemical.
Work Environment	This category considers the space in which the chemical is to be used and the potential hazards to the environment. Separation distances to ecological areas should also be considered here.

Table 5 - Environmental Risk Categories

Environmental Risk	High	Medium	Low
Environmental Hazard <ul style="list-style-type: none"> ecotoxicity on licence national standard 	<ul style="list-style-type: none"> a cumulative ecotoxin licence condition 	<ul style="list-style-type: none"> national standard ecotoxicity 	<ul style="list-style-type: none"> low ecotoxicity not a licence parameter no standard
Score	14	10	2
Frequency of Use	Daily or more frequent	Up to weekly	Greater than weekly, including one use.
Score	3	2	1
Amount Used <ul style="list-style-type: none"> each time 	Greater than 2 kg or 2 litres	Less than 2 kg or 2 litres	Less than 500 g or 500 ml
Score	3	2	1
Physical Properties <ul style="list-style-type: none"> easily spilt powder or liquid frequent movement over catchment areas odour generation 	<ul style="list-style-type: none"> fine dust needed to be transported around works lots of potential releases very volatile or soluble 	<ul style="list-style-type: none"> moderate potential releases – a solid that doesn't flow or dissolve some odour generation capacity 	<ul style="list-style-type: none"> limited opportunity to be released to environment Insoluble non volatile
Score	3	2	1
Work Environment <ul style="list-style-type: none"> containment, bunding, drains sealed areas 	<ul style="list-style-type: none"> goes straight into soil goes straight to the drains not contained 	<ul style="list-style-type: none"> Area sealed but not collected well Site drainage system collectable licenced emission point 	<ul style="list-style-type: none"> bunded well recoverable easily dispersed
Score	3	2	1

Table 6 - Environmental Risk Assessment

To calculate the Environmental Score use the Environmental Risk Assessment Table 6 and determine the score for the five (5) factors as per the example in Table 7.

EXAMPLE

Safety Risk	Category	Score	Justification
Environmental Hazard	Medium	10	Meets National Standard.
Frequency of Use	High	3	Daily use.
Amount Used	Medium	2	Less than 1.5L.
Physical Properties	Medium	2	Doesn't flow easily.
Work Environment	Medium	2	Area sealed but not bunded.
Total		19	RISK = MEDIUM

Table 7 – Example Environmental Score

SCORE	RISK RATING
21 to 26	HIGH
13 to 21	MEDIUM
6 to 12	LOW

Table 8 - Environmental Potential Risk Rating

7. INSTRUCTION FOR USERS

Before any material or chemical product is used in the workplace, instruction in accordance with the risk-to-the-user assessment shall be given as follows:

a. High Risk to User

Before commencing work with **HIGH** classification materials and products, the Team Leader shall ensure that the employee is instructed on the specific hazards and the safe work practices required, ensuring minimum risk when using the material. A task analysis must be undertaken for the task prior to use.

b. Medium Risk to User

Maintain an awareness of hazards and reinforce standard work practices.

Before commencing work with **MEDIUM** classification materials and products, the Team Leader and/or employee shall ensure that the workplace is adequately ventilated and required Personal Protective Equipment (PPE) is used to protect against the inhalation of fumes or dust, contamination of eyes, and contact with the skin. Gloves and dust masks shall be worn if necessary.

c. Low Risk to User

Maintain standard work practices.

When working with these **LOW** classification materials and products, wear general PPE; such as safety glasses or goggles, dust masks and gloves, and follow standard work practices.

8. EXPOSURE

Exposure of personnel to hazardous material should be kept to levels as low as reasonably achievable, and in all cases below levels set by regulations that are relevant to Australian and/or international exposure standards.

Exposure and/or environmental control measures shall be evaluated and implemented in the following order of preference:

1. Elimination of the need for the hazardous substance.
2. Substitution with a less hazardous substance.
3. Engineering measures, such as enclosure and/or ventilation.
4. Administrative measures, such as restricting access / exposure via job rotation.
5. Use of PPE.

Exposure of personnel to hazardous substances on site shall be minimal but for certain non-operational events, importation and use may be unavoidable.

Note: Hazardous chemicals shall only be handled by personnel properly protected and trained in the use of the recommended PPE.

Note: The use of special PPE to control exposure shall be restricted to short term, non-routine work, or for emergency situations only.

9. PURCHASING RESTRICTIONS AND USAGE

Unnecessary procurement / storage and handling of hazardous substances shall be avoided or eliminated at all times.

All substances that have not been previously used by the Company shall be reviewed for possible hazards before the order is placed. Reviews of this type shall be conducted by the person responsible for the technical aspect of the job concerned, and by the Hygiene Advisor.

A hazardous substance shall not be introduced to the workplace unless:

- a. Its use, presence or production is essential and there is no equivalent product or process available which is less hazardous.
- b. Applicable National Industrial Chemicals Notification and Assessments Scheme (NISNAS) requirements are met.
- c. An approved Safety Data Sheet (SDS) is available to those handling or using the material, prior to its availability in the workplace.
- d. All statutory and company requirements can be met for:
 1. safe handling and health protection,
 2. packaging,
 3. labelling,
 4. storage,
 5. transport,
 6. emergency procedures, and
 7. waste disposal and environmental protection.

Personnel can find all necessary safety information about hazardous materials in their specific area by referring to the SDS of that material in the ChemAlert system. Such safety information includes physical properties, toxicity, precautions and safe handling. Managers are responsible for ensuring that personnel on site are fully briefed on any special precautions that need to be taken when working with a particular material.



THE REQUESTING TEAM LEADER IS TO MAKE AVAILABLE RECOMMENDED PPE BEFORE PURCHASING THE MATERIAL PRODUCT.



10. RESPONSIBILITIES

10.1 MANAGERS

Managers shall ensure that Team Leaders, and employees new to sections, receive instruction on the control of workplace hazardous materials.

Conduct reviews with Team Leaders as detailed in Section 10.2.

10.2 TEAM LEADERS

Work practices shall be reviewed annually by section Team Leader to ensure that any risk to users from possible exposure to hazardous materials and products is minimised.

An annual review, with advice from the Hygiene Advisor, shall be made by Team Leaders, of chemicals, products and materials held in each section against the register. This review shall cover:

- a. status of the register (for example, current / outdated materials and products),
- b. elimination of duplicated materials or products, and
- c. substitution, where possible, by a less hazardous material.

Team Leaders, with their Section Managers, shall regularly review:

- a. How this procedure is used to categorise hazards, work methods, environment, risk to users, and safe work practices.
- b. Instruction regarding specific hazards and work practices when dealing with hazardous materials and products.

11. REFERENCE MATERIAL

11.1 DOCUMENTED INFORMATION SYSTEM PUBLICATIONS

For additional information on hazardous substances, refer to:

CSBP Guides

Ammonium Nitrate Safety ([CSBP-GM-11-037-01](#))

WesCEF Asbestos Management Plan ([WCEF-PD-OHS-130-01](#))

Confined Spaces ([CSBP-GM-11-031-052](#))

Statutory Code of Practices

Code of Practice for Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, 2016) <https://www.safeworkaustralia.gov.au/system/files/documents/1705/mcop-preparation-of-safety-data-sheets-for-hazardous-chemicals-v2.pdf>

11.2 QUALITY RECORDS TABLE



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RECORD IDENTIFICATION		STORAGE MEDIA	STORAGE LOCATION	INDEXING METHOD	RETENTION PERIOD	AUTHORISED DISPOSER	DISPOSAL METHOD
Form No.	Document Title						
SF0733	Request for New or Alternative Chemical Product/Material	Hard Copy	Safety Dept	Chemical registration number	30yrs.	Hygiene Advisor	Shred
	SDS	Hard Copy	Safety Dept	Chemical registration number	30yrs.	Hygiene Advisor	Shred
SF0733	Request for New or Alternative Chemical Product/Material	Electronic Copy	G:\Safety And Emergency Services\4. General Hygiene\4.1 .a Chemical Approval	Chemical registration number	30yrs.	Hygiene Advisor	Delete
	SDS	Electronic Copy	G:\Safety And Emergency Services\4. General Hygiene\4.1 .a Chemical Approval	Chemical registration number	30yrs.	Hygiene Advisor	Delete
	Chemical Requests	Electronic Copy	ChemAlert	Product name	Life of ChemAlert licence		N/A