Procedure

Hazardous Chemicals Management

Health and Safety

31/01/2023

45-PR-SA-0061 Rev 1

Hazardous Chemicals Management			
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1. PURPOSE

The purpose of this procedure is to provide guidance and the processes for all aspects in the management of hazardous chemicals including approval, procurement, transport, storage, handling and disposal.

This is to ensure employees, contractors and third parties will not suffer adverse health or safety effects and the environmental risk and impacts due to spill or other releases of hazardous chemicals are minimised.

2. SCOPE

This procedure applies to the purchasing, selecting, storing, use and disposing of chemicals at all sites and facilities operated by Fortescue. Where Fortescue has an equity stake but does not have operational or responsibility for a site, this document must be made available to the operator so comparable standards are applied. Where operating internationally, this procedure shall be followed/adapted with compliance to local legislative requirements where required.

Contractor groups must, as a minimum, meet or exceed the requirements outlined in this procedure.

Table 1: Key Accountabilities

Role	Responsibility
Department Manager	• Implement this procedure where it is relevant to their area of responsibility. • Ensure that no new chemicals are used without approval.
Chemicals Administrator	• Assist chemical requestors / work areas with the evaluation of hazardous chemicals • Provide feedback to the chemical requestor on the approval of a chemical. • Ensure all chemicals are entered into ChemAlert stock register and stock holdings. • Update stock register and holdings in ChemAlert periodically as requested.
Supply Team	• Only approve the purchase of chemicals that are approved in ChemAlert.
Environment	• Review / approve chemicals that have potential environmental impacts
Health and Safety (HS)	• Provide support, advice and consultation in managing the risks of hazardous chemicals. • Assist with the review and update of this procedure.
Corporate Hygienist	• Provide support and advice in managing the risks of hazardous chemicals. • Review and update of this procedure.

Role	Responsibility
Contractors	• Comply with Fortescue policies and procedures on the safe use of hazardous chemicals when onsite. • Develop and maintain a hazardous chemicals register for all substances when onsite.
Workers	• Participate in chemical risk assessments where required • Comply with the SDS and the controls implemented from the risk assessment / JHA.

3. DEFINITIONS

Table 2: Definition of Terms/Acronyms

Word/Term	Definition
ChemAlert	A web based chemical information database, which allows searching for a chemical and then printing of a manufacturer safety data sheet, ChemAlert report, GHS report or label.
ChemAlert Administrator	A person determined competent to review and approve hazardous chemical risk assessments and completed the online training in ChemAlert.
Combustible Substance	A substance that is combustible and includes dust, fibres, fumes, mists or vapours produced by the substance
Container	Anything in or by which a hazardous chemical is, or has been, wholly or partly covered, enclosed or packed, including anything necessary for the container to perform its function as a container.
Dangerous Goods (DG)	A substance, mixture or article that meets the criteria of, or is listed in, the Australian Code for the Transport of Dangerous Goods by Road & Rail.
Fortescue	Fortescue Metals Group Limited all subsidiaries
Exposure standard	An exposure standard published by Safe Work Australia in the Workplace Exposure Standards for Airborne Contaminants. Represent the airborne concentration of a particular substance or mixture that must not be exceeded.
Globally Harmonised System (GHS)	A single internationally agreed system of chemical classification and hazard communication through labelling and Safety Data Sheets (SDS)
Hazardous Chemicals	A substance, mixture or article that satisfies the criteria for a hazard class in the GHS.
Hazard Statement	A description of the chemical hazard assigned to a particular hazard category, for example ‘highly flammable liquid and vapour’
Label	Written, printed or graphical information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the container of a hazardous chemical

Word/Term	Definition
Placard	A sign or notice displayed or intended for display in a prominent place, or next to a container or storage area for hazardous chemicals at a workplace, that contains information about the hazardous chemical stored in the container or storage area
Precautionary statement	Recommended actions to take to reduce the risk of chemical exposure. These phrases are specific to prevention, storage, disposal and response.
Substance	A chemical element or compound in its natural state or obtained or generated by a process: • including any additive necessary to preserve the stability of the element or compound and any impurities deriving from the process, but • excluding any solvent that may be separated without affecting the stability of the element or compound or changing its composition.
Safety Data Sheet (SDS)	A document that provides information on the properties of hazardous chemicals and how they affect health and safety in the workplace.

4. LEGISLATIVE CONTEXT

The following Legislation, Codes and Standards provides the broad framework for which this procedure must operate and with which it needs to comply.

Table 3: Legislation

Act / Regulation / Standards
Australian Code for the Transport of Dangerous Goods by Road and Rail, 7th edition, 7.3 August 2014 (ADG Code)
Western Australia Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007
SWA, Model Code of Practice – Managing risks of hazardous chemicals in the workplace, 2020
SWA, Model Code of Practice – Preparation of safety data sheets for hazardous chemicals, 2020
SWA, Model Code of Practice – Labelling workplace hazardous chemicals, 2020
SWA, Guidance material - Managing risks of storing chemicals in the workplace, 2020
AS1319-1994 Safety Signs for the Occupational Environment
AS1345-1995 Identification of the Contents of Pipes, Conduits and Ducts
AS1940-2004 The Storage and Handling of Flammable and Combustible Liquids

Where operating internationally, this procedure shall be followed/adapted with compliance to local legislative requirements where required.

5. PROCEDURE

5.1 Chemical Registers

A chemical register must be developed and maintained for each workplace where hazardous chemicals are located. The primary chemical register for all Fortescue operations is ChemAlert, however smaller/short term contractors/projects may maintain standalone registers that comply with this procedure and local legislation.

5.1.1 ChemAlert

Fortescue utilises ChemAlert as the primary chemical management system. The system has several uses:

- Search – ability to search stock holdings and stock register for available SDS's within the ChemAlert system.
- Risk Assessment – section to track chemical risk assessments.
- Stock Management – stock holdings, lists all approved chemicals for use on Fortescue sties, per storage area and stock register lists available safety data sheets (SDS) within the ChemAlert system.

5.2 Safety Data Sheets (SDS)

- All chemicals must have a SDS readily available, at the storage location.
- The supplier or importer must provide a compliant SDS in accordance with local legislative requirements.
    - For Australian Operations, safety data sheets must comply with SWA, Model Code of Practice – Preparation of safety data sheets for hazardous chemicals, 2020
- All SDS hold a validity of no more than 5 years from the date it is published by the manufacturer.

5.3 Chemical Approval Process

5.3.1 Chemical Approvals

All hazardous chemicals to be used on Fortescue sites must be risk assessed and approved for use. Chemical risk assessments can be completed online in ChemAlert (where available) or using the Hazardous Chemical Risk Assessment Form.

Appendix 1 outlines the chemical approval process for requestors and the ChemAlert Administrators to follow. Allow sufficient time for chemical requests (i.e. 2 weeks prior to expected use/arrival) to be processed.

5.3.1.1 Risk Assessment

- A risk assessment must be completed for hazardous chemicals and dangerous goods only (amber or red in ChemAlert).
- Risk assessments must be performed by workers with sufficient knowledge of the work.
- The hazard chemicals risk assessment includes:
  - The task or activity for which the chemical is to be used
  - Potential for interaction with other chemicals
  - Quantities being stored and storage location
  - Environmental effects
  - Health effects
  - Risk rating according to the Fortescue risk matrix
- Risk assessments are required to be updated when
  - The process is modified or
  - An incident occurs

The approval process for a chemical is dependent upon the overall risk score. The site ChemAlert Administrator will advise the requestor if the chemical has been approved or denied.

Table 4: Chemical Approval Process

Risk Score	Personnel required for review and approval
Low to Medium	ChemAlert Administrator / Site Safety Environment (as required)
High / Extreme	ChemAlert Administrator / Site Safety Environment (as required) Department Manager **Change Management Process to be followed. CR# to be recorded on Risk Assessment Form.**

5.3.1.2 Chemicals approved for All Fortescue Sites

A chemical can be approved for “All Fortescue Sites” if the context in which it was approved can be reproduced (i.e. equipment, task, work, environment, controls are identical) where each site ChemAlert Administrator has given approval via email. Change management shall be followed for Chemicals required to be used “for all sites”.

5.3.2 Control Measures

Risk reduction measures should be implemented to reduce the risk to As Low As Reasonably Practicable (ALARP). The hierarchy of controls should be used to determine appropriate controls.

5.3.3 Contractors Chemicals

Contractors must provide the site with a copy of the chemical risk assessments, approvals and register for approval prior to mobilisation in accordance with the above processes.

5.3.4 Purchasing

The purchase of chemicals will be controlled through:

- The new chemical request process.
- ChemAlert - controls the purchase of existing or approved chemicals, where only products that have a registered stock holding number (i.e., have gone through the approval system) can be purchased.

The Supply Team has the ability to view the approval documentation for chemicals in ChemAlert and shall not order unapproved chemicals.

5.4 Storage and Segregation

Storage and segregation of chemicals must comply with the Fortescue Chemical and Hydrocarbon Procedure and the Model Code of Practice: Managing risks of hazardous chemicals in the workplace 2020.

For further guidance on storage, consult SafeWork Australia Guidance material - Managing risks of storing chemicals in the workplace, 2020.

Appendix 2 shows the recommended segregation distance table for hazardous chemicals.

5.5 Labelling

5.5.1 Container Labelling

All hazardous chemicals supplied must be labelled in accordance with the Model Code of Practice – Labelling workplace hazardous chemicals, 2020.

- Chemical labels must be in English and as a minimum contain the following:
    - the product identifier.
    - the name, Australian address and business telephone number of either the manufacturer or the importer.
    - the identity and proportion disclosed for each chemical ingredient.
    - any hazard pictogram(s) consistent with the correct classification(s) of the chemical.
    - any hazard statement(s), signal word and precautionary statement(s) that is consistent with the correct classification(s) of the chemical.
    - any information about the hazards, first aid and emergency procedures relevant to the chemical, which are not otherwise included in the hazard statement or precautionary statement, and
    - the expiry date of the chemical, if applicable.

Any chemical that is incorrectly labelled or has no label must be clearly marked with “Caution, do not use: unknown substance” and removed from site as soon as practical.

Where a container that is too small to attach a label with all the information that is required for hazardous chemical labelling, then the label must be written in English and include the following:

- the product identifier.
- the name, Australian address and business telephone number of either the manufacturer or the importer.
- a hazard pictogram or hazard statement that is consistent with the correct classification of the chemical, and any other information required for hazardous chemicals labels in general that is reasonably practicable to include.

5.5.2 Decanting

Where a chemical is decanted from the original container to another container and is not utilised immediately, then the container must be labelled with:

- Brand name,
- Product name,
- Code name or code number specified by the supplier,
- Risk phrases and
- Safety phrases that apply to the hazardous chemical.

Such labels can be printed from ChemAlert using the product report function.

Immediate use refers to:

- the chemical is not left unattended by the worker who decanted it.
- the chemical is used only by a worker present at the decanting process.
- the container is subsequently rendered free from any hazardous chemical immediately after use, so the container is in the condition it would be in if it had never contained the chemical.

5.6 Placards and Signage

Placards must be in accordance with the requirements outlined in the Dangerous Goods Safety (Storage and Handling of Non-explosive) Regulations 2007.

Placards are required to be displayed at the entry on bulk containers and where the storage quantities of any DG category meet the placard quantity.

A prohibition notice – “No naked Lights” in a style specified in table 1 of AS 1319 Safety signs for occupational environment should be posted around flammable substance stores.

5.6.1 Vessels, pipes and Other Enclosed Systems

Any vessels, pipes and other enclosed systems containing dangerous goods must be appropriately designed and manufactured. They must be identified by labels or other means consistent with AS 1345-1995: Identification of the contents of pipes, conduits and ducts or AS 1319-1994: Safety Signs for the Occupational Environment.

5.7 Transport

Transporting dangerous goods must comply with the Australian Dangerous Goods Code (ADG Code).

A vehicle used to transport dangerous goods on site and any equipment on the vehicle used for loading, unloading or transferring all or part of the load should be suitable for the purpose. It must be free of any defect that is likely to increase the level of risk associated with transporting or handling the load.

5.8 Training

5.8.1 ChemAlert Adminstrator Training

ChemAlert Administrators shall be granted administrator access after successful completion of the nine ChemAlert Training Modules in Success Factors. Access shall be granted by the Corporate Health Team.

5.8.2 Hazardous Chemicals and Dangerous Goods Training

Where there is a risk of illness or injury using hazardous chemicals or dangerous goods, training shall be undertaken with consideration to the following:

- the nature of the hazardous chemicals involved and the risks to the worker
- the control measures implemented, how to use and maintain them correctly
- the arrangements in place to deal with emergencies, including evacuation procedures, containing and cleaning up spills and first aid instructions
- the selection, use, maintenance and storage of any PPE required to control risks and the limitations of the PPE
- any health monitoring which may be required and the worker's rights and obligations
- the labelling of containers of hazardous chemicals, the information that each part of the label provides and why the information is being provided
- the availability of SDS for all hazardous chemicals, how to access the SDS, and the information that each part of the SDS provides, and
- the work practices and procedures to be followed in the use, handling, processing, storage, transportation, cleaning up and disposal of hazardous chemicals.

5.9 Monitoring

5.9.1 Chemical Health Monitoring

Health Monitoring to be conducted in accordance with the Fortescue Health Surveillance Procedure.

5.9.2 Atmospheric Contaminant Monitoring

Atmospheric contaminant monitoring must be performed in accordance with the Fortescue Occupational Hygiene Management Procedure.

5.10 Handling/Disposal / Removal

Personnel required to handle or otherwise interact with Dangerous Goods or other Hazardous chemicals must utilise additional PPE specific to the risks outlined the Manufacturer's instruction detailed in the SDS or as identified in the Task/Project JHA or other risk assessment covering the use of the chemical as part of a job task completion.

Disposal and removal of chemicals must be conducted in accordance with Fortescue Chemical and Hydrocarbon Management Plan and local legislative requirements.

5.11 Emergency Management

Emergency management plans and procedures shall be based on risk assessment and must include emergency response plans for dealing with any risks associated with the storage, handling and use of dangerous goods and hazardous chemicals of any quantity.

The Model Code of Practice: Managing risks of hazardous chemicals in the workplace 2020, outlines specific requirements for hazardous chemical emergency management.

5.12 Inspections

Inspections of chemical storage areas must be conducted in accordance with Fortescue Chemical and Hydrocarbon Storage Procedure.

Additional areas inspection shall be undertaken as organised by the area owner on a risk-based frequency to ensure storage and management is in accordance with this procedure and the *Model Code of Practice: Managing risks of hazardous chemicals in the workplace (2020)*.

5.13 Spills

Chemical or hydrocarbon spills must be managed in accordance with the Environment Spills Procedure.

5.14 Reporting

Any injury / illness, actual or suspected release or spill of a hazardous chemical must be reported and investigated in accordance with Incident Event Management Procedure.

6. MONITORING AND REVIEW

Table 5: Programmes and Schedules

Monitor (Audit) and Review	Frequency	Responsibility
Procedure Review	Three (3) yearly (or as and when required)	Corporate Health & Safety

7. DOCUMENTATION AND RECORDS MANAGEMENT

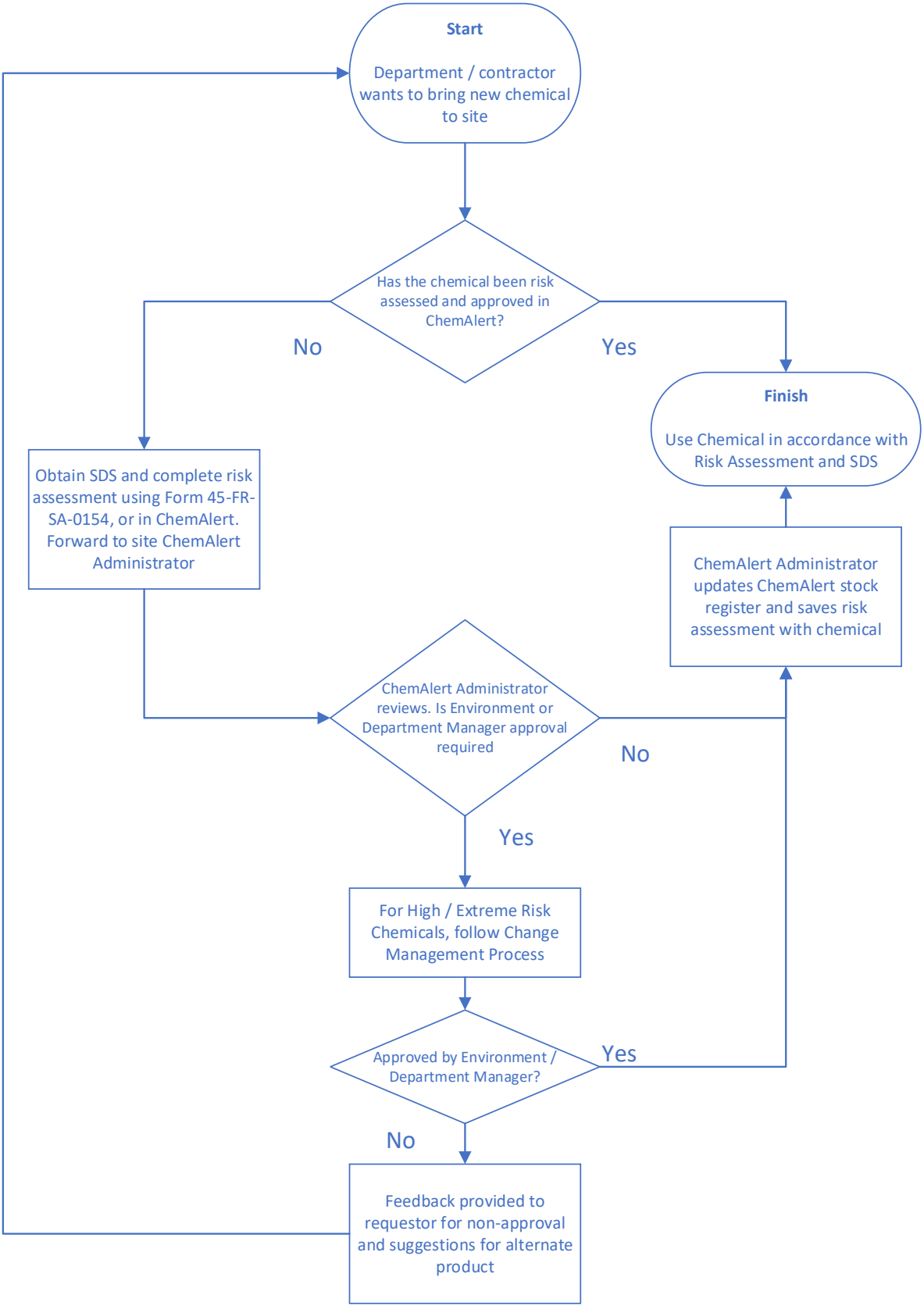
This Procedure and all supporting documents will be managed as per Fortescue Document Governance Standards.

The following documents should be read in conjunction with this procedure:

Table 6: Policy, Standard, Work Instructions, Forms (Templates)

Document ID	Title of Document
45-FR-SA-0154	Hazardous Chemicals Risk Assessment Form
45-PR-SA-0058	Occupational Hygiene Management Procedure
100-PL-EN-0011	Chemical and Hydrocarbon Management Plan
100-PR-EN-1064	Chemical and Hydrocarbon Storage Procedure
100-PR-EN-1069	Environment Spills Procedure
100-PR-SA-0032	Health Surveillance Procedure

Appendix 1: Chemical Approval Process



Appendix 2: Segregation Distances for Hazardous Chemicals

Table 1: Recommended segregation of hazardous chemicals

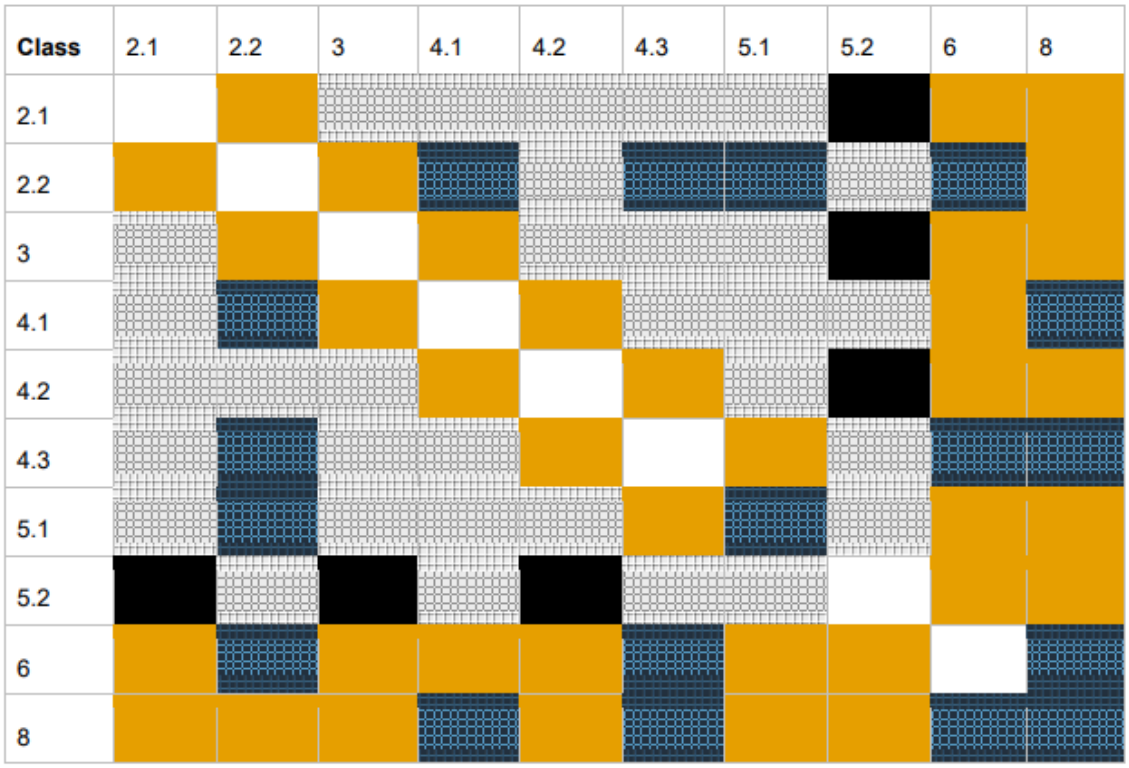


Table 2: Recommended segregation types

Segregation key	Segregation type
	COMPATIBLE: Chemicals with similar hazards are usually compatible. However chemicals may have more than one hazard and you should still check the SDS.
	REFER TO SDS: Separation of these chemicals may be necessary. Consult the SDS for further guidance.
	MINIMUM THREE METRE SEPERATION: These chemicals may react dangerously if stored together may and should be kept at least three metres apart.
	MINIMUM FIVE METRE SEPERATION: Storing these chemicals together will significantly increase the likelihood or severity of an incident. They should be kept at least five metres apart or in separate storage areas.
	ISOLATE: Dedicated storage areas or storage cabinets are recommended for self-reactive chemicals and organic peroxides, as is separation from other buildings and property boundaries.