



W E I R  
Legal & Consulting

# Regulation of Flammable Refrigerants

16 December 2020

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## Executive Summary

Flammable refrigerants are widely used in air conditioning and refrigeration systems in Australia. Their use has increased in recent years because of a shift away from high global warming potential (**GWP**) synthetic greenhouse gases. Whilst most alternative refrigerants have lower or no GWPs they are often flammable.

The need to regulate the use of flammable refrigerants has been recognised globally as important because the substances can ignite, causing injury or damage to property. There are a wide range of laws and other instruments that regulate flammable refrigerants in Australia. However, the laws are fragmented and disjointed as there is no one framework that governs their use. Instead, flammable refrigerants are regulated by a range of laws that primarily relate to WHS / OHS, dangerous goods and electrical safety. While there is a significant amount of consistency in the applicable laws around the country, there are some variations between jurisdictions. As a result, the regulatory landscape is confusing. Not only is it potentially difficult to understand and comply with, there are multiple regulators which is likely to make coordinated and effective enforcement of laws challenging.

## Part 1 – Introduction

This report was commissioned by Refrigerants Australia (RA) to consider the regulation of flammable refrigerants in Australia.

The report is intended to provide an overview of the regulatory and quasi-regulatory instruments which control the use and handling of flammable refrigerants in the different jurisdictions around the country. The report also highlights key themes and gaps within the regulatory landscape.

### 1.1 Scope of report

This report addresses the regulation of flammable refrigerants both in bulk and as used within air conditioning or refrigeration equipment over the lifecycle of a refrigerant, from import to supply and use to recovery. It covers systems charged with flammable refrigerant that are stationary, such as air conditioners and refrigeration systems in buildings and mobile systems, such as vehicle air conditioning systems. The report does not explicitly consider disposal of refrigerant, as a dangerous good/ hazardous substance, which we understand would be covered by regulation of industrial waste in a range of separate pieces of legislation.

Relevant legislation and publications were reviewed via online research, including websites of the regulators and government agencies responsible for a particular aspect of regulation and key industry groups.

The report identifies the instruments that control flammable refrigerants and discusses themes and gaps within the regulatory environment. It is a map of the national legislative framework; it does not include a detailed analysis of what is in each instrument or the differences between similar types of legislation across different states and territories. It is also not intended to constitute legal advice; advice should be sought about any specific scenarios involving the use of flammable refrigerant.

The report considers legislation (acts and regulations) and other instruments such as codes of practice and standards as in force or published as at 1 October 2020. Several ‘guide’ type documents have been included given their significance, however the report does not attempt to incorporate all guidance documents which contain recommendations about flammable refrigerants.

The report includes instruments that have a focus on mitigating safety or danger. As such it does not include instruments that have an environmental rather than a safety emphasis, including the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth)* and *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (Cth)* (**ozone protection legislation**).

While some flammable refrigerants are also considered toxic (e.g. ammonia) the report considers their regulation only in respect to their flammability.

The report does not cover the use and regulation of flammable refrigerants in equipment or products other than air conditioning and refrigeration.

## 1.2 Abbreviations and acronyms

The following acronyms and abbreviations are used in this report:

<b>ACL</b>	Australian Consumer Law, a national law which sets out consumer rights called consumer guarantees.
<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail, Edition 7.6
<b>AS/NZS ISO 817</b>	AS/NZS ISO 817:2016 Refrigerant – Designation and safety classification. Globally recognised refrigerant toxicity and flammability rating system.
<b>AS/NZS 5149</b>	AS/NZS 5149 Refrigerating systems and heat pumps – Safety and environmental requirements, Parts 1 to 4. Specifies the requirements for the safety of persons and property, provides guidance for the protection of the environment and establishes procedures for the operation, maintenance and repair of refrigerating systems and the recovery of refrigerants.
<b>CFCs</b>	chlorofluorocarbons
<b>EESS</b>	Electrical Equipment Safety System
<b>GHS</b>	Globally Harmonised System for the Classification and Labelling of Chemicals
<b>GWP</b>	global warming potential
<b>HCFCs</b>	hydrochlorofluorocarbons
<b>HFCs</b>	hydrofluorocarbons
<b>HVAC&amp;R</b>	heating, ventilation, air conditioning and refrigeration
<b>NCC</b>	National Construction Code, comprising the Building Code of Australia (Volumes One and Two) and the Plumbing Code of Australia (Volume Three) which prescribe provisions for the design and construction of buildings and building work. References are to the 2019 version of the NCC.
<b>OHS</b>	Occupational Health and Safety.
<b>ozone protection legislation</b>	<i>Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (Cth)</i> and <i>Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (Cth)</i>
<b>RA</b>	Refrigerants Australia

## WHS

Work Health and Safety. The term WHS was adopted with the creation of the model WHS laws in 2011.

### 1.3 What are flammable refrigerants?

This report covers flammable refrigerants with one of the six refrigerant safety classifications in the following table as per AS/NZS ISO 817, or any other refrigerant that meets the criteria to be classified as one of those refrigerant classifications:

<b>A3</b>	<b>B3</b>	<b>Higher flammability</b>
<b>A2</b>	<b>B2</b>	<b>Flammable</b>
<b>A2L</b>	<b>B2L</b>	<b>Lower flammability</b>
<b>Lower toxicity</b>	<b>Higher toxicity</b>	

It also includes flammable refrigerants classified as Division 2.1 flammable gases under the Australian Dangerous Goods Code (**ADG**) or classified as Flammable Gas Category 1 using the Globally Harmonised System for the Classification and Labelling of Chemicals (**GHS**).

Some instruments do not refer to 'flammable refrigerants' by reference to these classifications. For the purposes of this report, it is assumed such refrigerants also fall within the scope of the classifications above.

## Part 2 – Why regulate flammable refrigerants?

The need to regulate the use of flammable refrigerants has been recognised globally as important because flammable refrigerant can ignite causing injury or damage to property.

Refrigerant is used throughout the built environment in air conditioning and refrigeration systems and equipment. It is also used in air conditioning systems of all modern vehicles and in refrigerated transport. Therefore, the increased use of flammable refrigerants means that there is a higher volume of flammable product present across all areas of the community. Although the likelihood of ignition associated with flammable refrigerant may be low, the consequence when ignition occurs can be high. For example, in an incident in regional Victoria in June 2014, gases from a refrigeration compressor ignited in the cellar of a hotel causing the deaths of the two workers who were removing the unit.<sup>1</sup>

In addition to flammable refrigerants, the increased use of plastics in furniture, building products, vehicles and clothing means that where a fire starts there is an increased likelihood for the fire to spread rapidly. In enclosed spaces, fires can quickly develop into ‘flash over’ causing explosion which can result in severe injuries or further spread of the fire and property loss.

Increasing knowledge of these risks and mitigation through reducing the likelihood of ignition can be managed through the setting of standards, training to ensure knowledge of standards and required competencies, and effective regulation.

The use of flammable refrigerants in new equipment can be managed by requiring the inclusion of safety features in the equipment to minimise ignition risks. It is therefore essential that those safety requirements are clearly set out and implemented in the manufacturing of that equipment and the certification of products to meet required standards.

The installation of new equipment and the maintenance of existing equipment must also meet required standards to ensure safety features are effective, intact and maintained during installation and through the life of the equipment. Those standards will vary with the type of installation and its use. For example, requirements for mobile refrigeration will differ from those for stationary equipment and requirements for appliances will differ from air conditioning and mechanical services equipment. This triggers a need to understand the competencies required for installers and maintenance contractors across a range of equipment and sectors. It also requires building and vehicle designers to understand design risks and how to manage them. Intuitively ensuring competencies are held by industry participants would be achieved through licence or accreditation schemes operated by industry or government regulation.

The introduction of flammable refrigerants in equipment not designed for it and which does not have the safety features required to contain it is a higher risk. Standard practice and industry guidance provide that non-flammable refrigerant should not be replaced with flammable refrigerant unless checks are made with the manufacturer of the equipment. Guidance from the regulators of WHS / OHS laws and industry includes recommendations about how to ensure equipment can safely contain the replacement refrigerant. Where refrigerants are removed from equipment and combined with

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<sup>1</sup> See the findings of the Coroners Court of Victoria with respect to the two deceased workers, <https://www.coronerscourt.vic.gov.au/sites/default/files/2019-01/Purtell%20-%20F38%20-%2014-3017.pdf> and <https://www.coronerscourt.vic.gov.au/sites/default/files/2019-01/Lobb%20-%20F38%20-%2014-3254.pdf>.

other refrigerants that are flammable, the handling, transport and disposal of the refrigerant must also be carefully managed and controlled.

Understanding these risks and developing policy for their regulation is the task of industry and government. The purpose of this report is to stocktake what exists in Australia so that this can inform a discussion about gaps, duplication, inconsistencies and the efficacy of existing regulation. This should, in turn, inform the development of policy for how government and industry will continue to effectively mitigate risks and harm.

Linked with policy development and regulatory effectiveness are concerns participants will have to manage legal liability. Where an incident does occur, questions will be asked about whether it was an accident or could have been avoided. Civil claims could be brought against industry participants by persons seeking compensation for injury, loss or damage. Industry participants are exposed to legal risk where they have not met regulatory obligations, breached contractual obligations or are in breach of a duty of care. Having clear and sensible standards that participants can follow provides them with the ability to mitigate legal risk or defend claims when things do go wrong. In this way policy development and good regulation provide not only mitigation from harm, but can also provide protection to competent, ethical industry participants when accidents occur.



## Part 3 – Regulation of flammable refrigerants

**Table 1** sets out the legislation and quasi-regulatory instruments that apply to flammable refrigerants.<sup>2</sup> **Table 2** includes the explanations / definitions of the column headings used in the table.

## Part 4 – Regulatory groups

The regulation of flammable refrigerants is complicated. There is no one set of laws that focus on flammable refrigerants as a subject matter. Instead, there are over one hundred different instruments spanning a range of topics which regulate their use.

The instruments fall within six broad regulatory groups, comprising three primary regulatory groups and three secondary regulatory groups.

The three primary regulatory groups are:

- **Work Health and Safety / Occupational Health and Safety (WHS / OHS);<sup>3</sup>**
- **Electrical safety;** and,
- **Dangerous goods.**

The three secondary regulatory groups are:

- **Licensing;**
- the **Australian Consumer Law (ACL);** and
- **Building regulation and building product safety.**

The primary regulatory groups are laws that directly or consistently apply to flammable refrigerants.

The secondary regulatory groups are laws that may not directly or consistently apply to flammable refrigerants. They probably have a limited effect on regulating flammable refrigerants because they have a broader focus than flammable refrigerants and will not necessarily cover all aspects of their use. There may be potential for these secondary laws to have more of an influence if they were the subject of reform.

**Figure 1** provides an overview of the regulatory landscape.

Four of the six regulatory groups apply to all the key industries involved in flammable refrigerants. The laws relating to electrical safety and building regulation and building product safety tend to apply only to domestic air conditioning and commercial air conditioning and refrigeration.

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<sup>2</sup> It includes instruments that impose licensing requirements only where they directly relate to the safety aspects of flammable refrigerants, meaning it is only the licensing QLD scheme that is included. Licensing is discussed at 4.5.

<sup>3</sup> We have referred to both WHS and OHS given VIC and WA have not adopted the model WLS legislation and have their own OHS laws – in WA being Occupation Safety and Health (OSH) laws, however for convenience we refer to them as OHS too.

**Table 3** shows the application of the regulatory groups to key industries.

**Figures 3 to 8** show the application of the regulatory groups to key participants or sectors.

In this part of the report, we identify and discuss each of the six regulatory groups which cover flammable refrigerants and highlight key issues for consideration.

## 4.1 Initial observations

The complex regulatory environment can make it difficult for those involved to be aware of and comply with the number of requirements. In some cases, the range of laws mean there will be duplication, with multiple pieces of legislation covering the same matters. For example, the WHS model regulations address general electrical safety in workplaces which may also cover matters dealt with by electrical safety legislation. This can cause confusion, making it difficult for the public and those that work in the sector to know where to seek guidance or make a complaint. Ideally, the regulators and stakeholders involved would work together to determine a policy on how to deal with these issues. This would assist to inform the community which regulators are primarily responsible for particular issues. For example, In the Northern Territory, the Safety Regulator has directed that if there is conflict between WHS laws and electrical safety laws<sup>4</sup>, the electrical safety legislation will apply to technical non-compliance and the WHS laws will apply to work practice or process non-compliance.<sup>5</sup>

### Issues for consideration

Regulation under multiple laws by different regulators requires ongoing collaboration and coordination. Consumers and industry can be easily confused about where to go to for assistance and which laws apply. These issues can be overcome if there is agreement on a process for referrals, information sharing and coordination of resources. Joint publications for consumers and industry could also assist.

## 4.2 Work Health and Safety (WHS) / Occupational Health and Safety (OHS)

WHS / OHS laws specify requirements for managing risks to protect the health and safety of employees, volunteers and other persons who come into contact with a workplace. They impose broad duties and obligations on duty holders including persons conducting a business as well as designers, manufacturers, importers, suppliers, installers of products, officers and workers. As they have such wide-ranging application, these laws apply to all parts of the supply chain and sectors that use or handle flammable refrigerants.

The Commonwealth, states and territories are responsible for implementing, regulating, and enforcing the laws in their jurisdiction. In each jurisdiction the WHS / OHS laws contain obligations to eliminate or minimise risk in the workplace so far as is reasonably practicable. Model WHS laws, comprising an Act, Regulations and Codes of Practice, have been implemented in the majority of jurisdictions (including the Commonwealth). VIC and WA have retained their own OHS laws, although

<sup>4</sup>The *Electricity Reform Act 2000 (NT)* and *Electricity Reform (Safety and Technical) Regulations 2000 (NT)* Regulations.

<sup>5</sup> See <https://worksafe.nt.gov.au/laws-and-compliance/electrical-safety-laws> (accessed 15 October 2020).

as at October 2020 there was a bill before the Western Australian Parliament to implement the model laws.<sup>6</sup> The Heads of Workplace Safety Authorities (HSWA) in Australia that individually enforce the WHS / OHS laws have developed a joint position paper to provide information on the obligations of work health and safety duty holders with respect to the use of flammable refrigerants at workplaces.<sup>7</sup> The position paper provides guidance about the use of flammable refrigerants in stationary and vehicle workplace environments, managing the risk of fire and explosion from refrigeration and air conditioning systems containing flammable refrigerant, and the storage and handling of the product.

#### Issues for consideration

The joint position paper about WHS / OHS obligations and the use of flammable refrigerants provides guidance for those who use or have some involvement with flammable refrigerants in the workplace. As it is relatively new, it will be important for stakeholders to ensure the guidance is being implemented to mitigate risk across all industries.

### 4.3 Electrical safety

Electrical safety laws specify requirements about electrical equipment and installations. These laws apply to flammable refrigerants to the extent they are contained in electrical equipment. The laws around electrical safety include general obligations which apply regardless of what type of refrigerant is used in the equipment. The laws relate to domestic air conditioning and to a lesser extent, commercial air conditioning and refrigeration.<sup>8</sup>

Electrical safety matters are regulated separately by each state and territory, with each jurisdiction having its own electrical safety laws and regulators. The frameworks are broadly consistent in that they each refer to standards to address technical matters and include a licensing regime. In particular, they all adopt the 'wiring rules'<sup>9</sup>, which set standards for electrical installations. The importation, manufacture and supply of household electrical equipment is regulated by the relevant safety standard and, in seven out of eight jurisdictions, the EESS. The EESS is the framework for the certification and registration of household electrical equipment. All jurisdictions except NSW currently apply the scheme or are transitioning to apply the scheme.<sup>10</sup> NSW has its own certification scheme for declared and non-declared articles.

While the EESS is not quite a national framework, both the EESS and the NSW scheme require air conditioners incorporating flammable refrigerants (and that are otherwise within scope) to be

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<sup>6</sup> The *Work Health and Safety Bill 2019* is currently in the upper house Legislative Council (as per WA Parliament website, accessed 13 October 2020). There was also a public comment period on proposed regulations based on the model WHS Regulations in 2019.

<sup>7</sup> "Flammable refrigerant gases position paper" (2018) – e.g. as published by Safe Work, <https://www.safework.nsw.gov.au/resource-library/hazardous-chemicals/flammable-refrigerant-gases-position-paper>.

<sup>8</sup> The EESS does not apply to equipment that is exclusively for commercial use. The scope of the EESS is discussed in more detail in this section.

<sup>9</sup> AS/NZS 3000: 2018 Electrical Installations.

<sup>10</sup> The EESS is adopted in QLD, VIC, WA and TAS and SA, NT and ACT are reportedly transitioning to the scheme, as per the Electrical Regulatory Authorities Council, <https://www.erac.gov.au/equipment/> (accessed 15 October 2020). NSW has its own scheme.

registered or certified as meeting the relevant standard and marked accordingly.<sup>11</sup> This has been a requirement in NSW from 1 July 2020.

Notably this applies to Class 2 or Class 3 refrigerants as per AS/NZS ISO 817. The EESS also covers air conditioners incorporating non-flammable or low flammable refrigerants but the NSW scheme does not. This means products incorporating lower flammability, Class 2L refrigerant will not require the same level of pre-market oversight in NSW as elsewhere around the country.

The relevant extracts of the in-scope electrical definitions and risk levels for the air conditioners and refrigerating appliances covered by the EESS are included at **Table 6**.

However, the EESS is limited to 'in-scope' equipment, being equipment that is:

- rated at a voltage greater than 50 V AC RMS or 120V ripple-free DC; and
- rated at a voltage less than 1000V AC RMS or 1500V ripple-free DC; and
- is designed or marketed as suitable for household, personal or similar use.<sup>12</sup>

As such it will not cover equipment with very low or high voltage, or that is exclusively for commercial or industrial use.

It also does not cover second-hand equipment that has previously been sold in Australia and that met the requirements for selling electrical equipment at the time it was first offered for sale. This means that a used air conditioner that has been re-gassed with flammable refrigerant will not be subject to this framework.

State and territory legislation also requires that all electrical equipment, whether in or out of the scope of the EESS or the NSW scheme, must still comply with the relevant standards when it is installed in an electrical installation<sup>13</sup> (a situation which would be characterised as a workplace to which WHS / OHS laws would also apply and if in Queensland, the approval requirements for devices may also be applicable).

#### Issues for consideration

Given the EESS is a relatively new scheme, monitoring its implementation and effectiveness will be important. As with any product certification scheme, ensuring the integrity of certifying bodies will be important. Promoting awareness of the scheme more broadly to consumers, the building sector and the automotive industry will also help to identify uncertified products so that swift regulatory action can be taken to prevent installations.

<sup>11</sup> See Table 6 in relation to the EESS and the 'Explanatory Notes for the published approval and sale of electrical articles in NSW' January 2020 in relation to the NSW scheme, at [https://www.fairtrading.nsw.gov.au/\\_data/assets/pdf\\_file/0009/820818/Explanatory-notes-for-the-approval-and-sale-of-electrical-articles-in-NSW-January-2020.pdf](https://www.fairtrading.nsw.gov.au/_data/assets/pdf_file/0009/820818/Explanatory-notes-for-the-approval-and-sale-of-electrical-articles-in-NSW-January-2020.pdf). Note the relevant standard is AS/NZS 60335.2.40.

<sup>12</sup> As per the definition in s48B of the *Electrical Safety Act 2002 (Qld)*, also adopted in other jurisdictions (the QLD legislation to be the basis for each participating jurisdiction as per the Intergovernmental Agreement).

<sup>13</sup> Section 1.7 of AS/NZS 3000.

## 4.4 Dangerous goods

Dangerous goods laws specify requirements about the storage, handling and transport of dangerous goods, which can include flammable refrigerants. Their focus is on dangerous goods in bulk quantities and stored in cylinders and receptacles rather than within appliances or plant. These laws apply to all industries relating to flammable refrigerants. However, laws that relate to the land transport of dangerous goods will not generally apply to the import of flammable refrigerant.

At a high-level dangerous goods laws can be categorised into two groups, those that relate to the transport of dangerous goods and those that apply to the storage and handling of dangerous goods.

### *Transport of dangerous goods within Australia*

The state and territory laws for the transport of dangerous goods by road and rail are based on model legislation.<sup>14</sup> The laws impose obligations on those involved in the land transport chain to ensure that dangerous goods are transported safely. Each jurisdiction incorporates the ADG into their dangerous goods transport regulations, which contain the technical information and requirements for the classification, packing, marking and labelling and transport of dangerous goods. While this creates consistency, amendments and reforms to the model laws and ADG Code may not be implemented at the same time. For example amendments to the ADG and model regulations made in May 2018 commenced on different dates ranging from 1 July 2018 to 1 July 2019 and with the ACT and WA yet to amend their regulations.<sup>15</sup> **Figure 8** includes a comparison of the commencement of these amendments across the jurisdictions. These issues undermine the potential for national consistency and can create uncertainty for industry. We note the National Transport Commission have recently published an issues paper to examine the legal framework for the land transport of dangerous goods which considers issues around implementation and enforcement.<sup>16</sup>

Notably there may be different workplace and transport labelling requirements for hazardous substances, with the GHS applying to workplaces and the ADG Code requirements applying to transport. This creates complexity, although guidance indicates that the ADG Code may be used instead of the GHS pictograms where they are consistent.<sup>17</sup>

### *Storage and handling of dangerous goods*

WHS laws in all jurisdictions except VIC and WA manage the storage and handling of dangerous goods, as the WHS model regulations cover hazardous chemicals and dangerous goods in a single framework. In contrast, in Victoria hazardous substances are covered by OHS legislation, and dangerous goods are covered by specific dangerous goods legislation.<sup>18</sup> If a substance is both a dangerous good and a hazardous substance, both sets of legislation will apply. This may cause confusion and impose an additional regulatory burden. As noted above, legislative reform is proposed in WA to adopt the model WHS laws.

#### Issues for consideration

<sup>14</sup> There are separate requirements for the transport of dangerous goods via air and sea, as set out in Table 1.

<sup>15</sup> Figure 3, National Transport Commission, “Examining the legal framework for the land transport of dangerous goods”, Issues paper, June 2020, as reproduced in Figure 8 to this report.

<sup>16</sup> Ibid.

<sup>17</sup> “Labelling of workplace hazardous chemicals” model Code of Practice, July 2020.

<sup>18</sup> *Dangerous Goods Act 1985* and *Dangerous Goods (Storage and Handling) Regulations 2012*.

There is a high degree of consistency in the laws relating to dangerous goods, particularly with respect to those about the transport of dangerous goods by land given the adoption of model laws and the incorporation of the ADG Code in all jurisdictions. It is critical for amendments to the model laws and ADG Code to be implemented in a consistent manner to avoid the imposition of regulatory burden and cost on participants, particularly those who operate in cross-border operations. The review by the National Transport Commission may provide an opportunity to input into current laws and put forward any proposals for reform.

## 4.5 Licensing

There are limited licenses that directly control the handling of flammable refrigerants.

The national ARCTick licensing scheme<sup>19</sup> controls the handling of ozone depleting and HFC refrigerants. Most of the refrigerants it covers are not flammable, but there are exceptions like R32 and with some refrigerant blends. It is likely that more of the refrigerants will be captured by this scheme. To the extent those licensed under the ARCTick scheme handle flammable refrigerants, this is coincidental as the scheme has an environmental rather than a safety focus. The ARC does provide a voluntary accreditation program for tradespeople working with A2L refrigerants<sup>20</sup> and it is running a safety campaign on R32.<sup>21</sup> Because most, if not all, persons licensed under ARCTick will also handle or use flammable refrigerant, the scheme could easily be adapted to regulate risks associated with flammable refrigerants provided a legislative basis could be established.

QLD is the only jurisdiction that requires a licence to handle some flammable refrigerants. This is known as a ‘gas work licence (hydrocarbon refrigerants)’ and permits the holder to carry out work on the gas system of a refrigeration appliance.<sup>22</sup> The regime also restricts the use of hydrocarbons to approved equipment or equipment installations that have been individually assessed and approved by government. The QLD system is restricted to hydrocarbons, meaning it does not cover all flammable refrigerants.<sup>23</sup>

There are a range of licences that could apply to flammable refrigerants under dangerous goods transport and WHS/ OHS laws, such as licences for drivers and vehicles to transport dangerous goods and to operate major hazard facilities.<sup>24</sup> These tend to focus on the transport or storage of bulk quantities of substances such as refrigerants rather than day to day handling of refrigerants by persons ‘on the tools’.

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<sup>19</sup> Licences and authorisations issued by the Australian Refrigeration Council as per the ozone protection legislation – ARCTick licensing scheme. This scheme is beyond the scope of this report – see Scope of Report.

<sup>20</sup> See [ARC Green Scheme Accreditation program](#).

<sup>21</sup> See e.g. <https://www.arctick.org/information/r32/>

<sup>22</sup> Pursuant to the *Petroleum and Gas (Production and Safety) Act 2004* – as referenced in Table 1 and Table 4.

<sup>23</sup> The legislation addresses “flammable hydrocarbon gas”, defined in Schedule 7 of the *Petroleum and Gas (Safety) Regulation 2018 (Qld)*. As such it does not cover all flammable refrigerants, such as R1234yf, a hydrofluoroolefin (HFO) classified as an A2L mildly flammable substance.

<sup>24</sup> For example, see Part 18 of the *Dangerous Goods (Road and Rail Transport) Regulation 2014 (NSW)* and Chapter of the model WHS Regulations.

Those persons who work with flammable refrigerants may be required to hold other licenses or registrations to permit them to carry out work in their sector.<sup>25</sup> This includes motor vehicle repairers, who may repair and re-gas air conditioners, and air conditioning and refrigeration technicians, who may install and repair systems and equipment. These licensing requirements are specific to each jurisdiction and vary around the country.

The licensing and registration requirements for air conditioning and refrigeration technicians is particularly disjointed. There are specific air conditioning licence or registration classes in only three states, NSW, VIC and QLD (see **Table 4**). Even between those states the approach to licensing, including the licensing categories, differs. Technicians in each Australian jurisdiction must obtain a restricted electrical licence to conduct incidental electrical work, such as the disconnection and reconnection of equipment (see **Table 5**).

This means that in some jurisdictions, air conditioning and refrigeration technicians will be required to hold three licences – an air conditioning and refrigeration licence, a restricted electrical licence and the ARCTick licence. Motor vehicle repairers may also be required to hold an industry specific licence or registration in addition to an ARCTick licence.

The requirement to hold multiple licences or registrations imposes a regulatory burden on participants. They must apply and pay for multiple licenses and potentially also bear indirect costs associated with managing their compliance with regulatory requirements, such as training, systems and processes. It also creates confusion, both for participants and consumers.

Further, given none of the licensing requirements beyond those in QLD have a direct correlation to the handling of flammable refrigerants there is a potential, or at least a perception, that they do not adequately ensure those licensed have the required competencies and knowledge to mitigate risks associated with the use of flammable refrigerants.

#### **Issues for consideration**

Most, possibly all industry participants that handle flammable refrigerants or that install or maintain equipment containing flammable refrigerants would be required to hold one or more licences. However, with the exception of QLD, those licensing regimes are not operating to ensure that those licensed have or maintain the competencies required to implement safety standards relating to flammable refrigerants. Consideration should be given to:

- how these existing regimes can be used as a vehicle for requiring competencies to be attained in relevant standards associated with the safe use of flammable refrigerants by all licences;
- whether the existing regimes could be simplified to reduce regulatory burden for industry participants.
- whether the existing regimes do cover all industry participants that may undertake work which relates to flammable refrigerants, and if not, how to ensure that those not licensed are captured by one of the existing regimes.

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<sup>25</sup> Such as motor repairers who re-gas air conditioners. These licence and registration requirements are generally not within the scope of this report, as they do not focus on flammable refrigerants.



## 4.6 Australian Consumer Law

The Australian Consumer Law (**ACL**) is a national consumer protection law relating to the supply of goods and services. It requires businesses to provide consumer guarantees about the supply of goods and services, including that goods must be of acceptable quality (which includes that they are safe) and fit for any purpose disclosed for sale, and that services be provided with due care and skill and be fit for purpose.

The ACL may regulate flammable refrigerants to the extent they are used in goods or form part of services provided to consumers that fall within the scope of the law. This generally includes products and services that are sold, hired or leased for under \$40,000, or over \$40,000 if they are normally bought for personal or household use.<sup>26</sup> ‘Goods’ would include domestic air conditioning equipment or refrigeration appliances and ‘services’ would include providing repairs to motor vehicles. Therefore, manufacturers and suppliers of some products containing flammable refrigerants would be captured by the ACL.

Consumer law regulators often refer consumers to specialist regulators even when the ACL may apply. This is to avoid duplication, manage the resources of consumer regulators and ensure that the regulator with specialist knowledge and expertise is involved in the response to the issue. Given the WHS / OHS and electricity safety regulators have significant responsibilities in the space, it may be that consumer law regulators would work with or refer a consumer to these bodies. Consumer law regulators are also not likely to intervene in scenarios where the goods are supplied from business to business in the course of a supply chain rather than from a business directly to a consumer. This could apply to scenarios where a person purchases an apartment with an air conditioning unit from a developer because the builder purchased the systems from a supplier during construction.

The ACL can also be enforced directly by consumers as part of civil claims. Therefore, consumers are not reliant on regulators taking enforcement action as is the case with other regulatory laws.

### Issues for consideration

Although consumer laws impose obligations on those who offer goods and services related to flammable refrigerants, consumer regulators will often collaborate with specialist regulators when complaints are made. Consumer laws can be used by consumers to seek compensation in civil actions. Consumer law regulators are one of many government stakeholders that should be invited to participate in policy development relating to flammable refrigerants.

## 4.7 Building regulation

The flammability of air conditioning and refrigeration systems within buildings is not specifically covered by the NCC, which contains the technical requirements for building work and buildings.

Whilst there is a performance requirement which refers to avoiding the spread of fire from service equipment having a high fire hazard or potential for explosion, the term “service equipment” is not

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<sup>26</sup> For general guidance see <https://www.accc.gov.au/consumers/consumer-rights-guarantees/consumer-guarantees>. There are other limitations too, the ACL itself sets out the scope. Its application to any specific scenario should be carefully considered.



defined.<sup>27</sup> Air handling duct work must meet certain fire hazard properties<sup>28</sup> and penetrations of pipe and duct work through fire rated wall, floor and ceiling must be sealed.<sup>29</sup>

The only place where the NCC references equipment containing flammable liquids or gases is in the deemed to satisfy provisions (which provide a pathway for compliance with the performance requirements) in relation to structures on roofs. Structures situated on a roof containing air-conditioning chillers, ventilating fans and their motors need not meet the requirements in the NCC for non-combustibility.<sup>30</sup> The same provision also says that where the structure on the roof contains other “service units” (which is not defined) that contains flammable or combustible liquids or gases, the structure would need to be non-combustible.<sup>31</sup>

The NCC does address refrigeration in terms of energy efficiency (relating to the performance and controls for air conditioning systems<sup>32</sup>) and safety aspects of refrigerated cool rooms or chambers such as the ability to communicate and exit from the inside of the room.<sup>33</sup> The installation of pressure vessels, including matters such as the distance between vents and walls and ceilings in case of explosion, is also covered.<sup>34</sup>

However, neither the NCC nor building regulation legislation within Australia reference AS/NZS 5149.

There is a requirement for additional provisions to be made if special problems in fighting fire could arise because of the nature or quantity of materials stored or used in a building.<sup>35</sup> This could apply to a building that is designed to store flammable refrigerant or a plantroom or cool room that uses a flammable refrigerant. It would require the building surveyor / certifier signing off on the proposed construction to ensure that this provision has been adhered to in the design and documentation for the building. The Guide to the NCC<sup>36</sup> says that the firefighting equipment required in the NCC is intended to deal with usual or expected hazards, whereas this provision applies where the nature of the building is not usual. It is unlikely that it would apply where air conditioning systems charged with flammable refrigerants are proposed to be used in a common scenario such as an apartment building.

The NCC has a general requirement that a building and plumbing or drainage installation must be constructed using materials, products, plumbing products, forms of construction and designs fit for their intended purpose to achieve the relevant requirements of the NCC. Evidence of suitability is required to take the form of certification or other written justification.<sup>37</sup> Whilst the term ‘plumbing products’ does include any appliance connected to a plumbing or drainage system (and therefore would capture air conditioning or piped refrigeration equipment), the suitability relates to compliance with the NCC. Given the NCC contains no specific requirements with regards to the use of flammable

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<sup>27</sup> NCC Volume One CP6.

<sup>28</sup> NCC Volume One Specification C1.10 clause 2 require duct work to meet AS 4254.1 and AS 4251.2.

<sup>29</sup> NCC Volume One Specification C3.15.

<sup>30</sup> NCC Volume One Specification C1.1 clause 2.5.

<sup>31</sup> Ibid.

<sup>32</sup> NCC Volume One Part J5.

<sup>33</sup> NCC Volume One G1.3 & G1.2 – Cool rooms.

<sup>34</sup> NCC Volume One G2.2 and GP2.2.

<sup>35</sup> NCC Volume One E1.10.

<sup>36</sup> A publication developed by the Australian Building Codes Board to assist in interpreting the requirements of the NCC.

<sup>37</sup> NCC Volume One A5.0, A5.1 and A5.3.

refrigerants in these types of equipment, the evidence of suitability requirements do not apply to require documentation relating to suitability of products containing flammable refrigerants.

To a certain extent WHS controls fill this gap. WHS / OHS laws will impose health and safety duties wherever work is carried out at a building, whether it is the construction of a new development or where the owner or resident of a building engages a contractor to perform work. This would cover both the installation of an air conditioner and its service or repair. Where flammable refrigerants are used, a 'hazardous atmosphere' assessment may be required to specifically manage risks associated with substances such as flammable gases.<sup>38</sup> Dangerous goods legislation may also apply.<sup>39</sup>

However, WHS / OHS laws will not necessarily account for broader building regulation issues such as additional fire loads in a building. If air conditioning systems charged with flammable refrigerant are proposed to be installed in an apartment building, WHS / OHS laws will not specifically require the holistic impacts on flammability to be considered and addressed. This could be particularly important where there are other features of the building that will be flammable, such as external combustible cladding.

Further, the fact that the NCC does not address refrigeration safety in terms of flammability means that building approval authorities and designers are not likely to consider these issues when deciding where plant is to be located and how it is to be configured, and builders and others involved in the transport and handling of equipment charged with flammable refrigerants may not appreciate that need for protocols to deal with flammable substances.

#### **Issues for consideration**

Increased use of flammable refrigerants in equipment installed or used in buildings directly affects building safety. Arguably the NCC should deal more directly with these risks or at least, expressly refer to other applicable laws to ensure they are aligned to the NCC requirements. There is a direct relationship between the development of building product safety laws and the NCC which makes the building regulators one of many government stakeholders that should be invited to participate in policy development relating to flammable refrigerants.

Fire safety authorities will also have a strong interest in the mitigation of risks associated with flammable substances. They have a primary function to act as first responders when an emergency occurs, but they also have obligations to manage workplace health and safety risks to their staff. Fire authorities can also be a source of useful data on the cause and consequences of fire incidents.

## **4.8 Building product safety**

Refrigeration and air conditioning products could fall within the legislation governing building product safety in QLD and NSW.

In recent years the two states have passed legislation to require increased accountability for the use of building products. The QLD legislation creates a chain of responsibility that provides all members

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<sup>38</sup> As per Division 8 of the model WHS Regulations, which have been implemented in all jurisdictions aside from VIC and WA. We have not specifically considered the OHS laws that apply in VIC and WA in relation to this same issue, however they are based on the same general premise of minimising risks to health and safety.

<sup>39</sup> E.g. *Dangerous Goods (Storage and Handling) Regulations 2012 (Vic)*.

of the building product supply chain are responsible for ensuring building products are safe and compliant with the relevant regulatory provisions. The NSW legislation provides for the identification, restriction (including product bans) and rectification of building products which pose a safety risk in buildings.<sup>40</sup>

We have conducted a high level review of each framework and consider that HVAC&R products installed in buildings may fall within scope. The key issue is whether the product is *incorporated into* or *connected to* the building by means of building work. This would generally occur as part of the construction of the building but could also occur post-construction if the alterations or renovations amount to building work. Products such as a split system air conditioner may meet this criterion where they involve the installation of pipes and other components within the walls or other areas of the building. In contrast, other, standalone products that are simply ‘plugged in’ would not.

If HVAC&R products are covered by the building product safety legislation frameworks, they would be subject to the obligations and powers set out in each Act. Notably in QLD this means that all persons involved in the supply of building products, which could include designers, manufacturers, importers, retailers and installers, have duties and obligations to ensure that non-conforming building products are not used in buildings, and to notify the regulator of any use or suspected use. This could cover split system air conditioners charged with flammable refrigerant they were not designed to take, or that do not comply with the manufacturer’s recommendations.

Some more detailed consideration of the application of the legislation at **Appendix A**. This is a general view only, based on a relatively high level review of the legislation.<sup>41</sup>

We have not identified any instances or examples where the application of this legislation to refrigeration and air conditioning type products has been considered – unsurprisingly, the focus of the discussions around non-conforming building products has been on combustible cladding, although other types of products including relating to electrical cabling have also been considered.<sup>42</sup>

At present QLD and NSW are the only jurisdictions to have introduced detailed building product safety legislation,<sup>43</sup> although other jurisdictions may follow. One of the recommendations of the Senate Economics References Committee’s report on non-conforming building products was that jurisdictions pass legislation similar to Queensland’s to address the accountability of participants across the supply chain.<sup>44</sup> The Australian Building Codes Board implementation team for the Building Confidence

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<sup>40</sup> As per the *Queensland Building and Construction Commission Act 1991 (Qld)* and *Building Products (Safety) Act 2017 (NSW)* (both included in Table 1).

<sup>41</sup> Careful consideration of the relevant provisions and their context in the legislation as a whole would be required to reach a firm view and whether individual products would fall within each framework would depend, to a certain extent, on their specific characteristics or features.

<sup>42</sup> For example, see the Senate Economics References Committee Report – Non-conforming building products: the need for a coherent and robust regulatory regime (4 December 2018) – see [Report](#).

<sup>43</sup> For completeness we note in TAS the Director of Building Control is empowered to make determinations about building and plumbing products based on safety, s20, *Building Act 2016 (Tas)* and r8 of the *Building regulations 2016 (Tas)*.

<sup>44</sup> See note 42, recommendation 6. We note that legislative amendments have been made in Vic and Tas to restrict or prohibit the use of products, but they relate to cladding products only – see s192 of the *Building Act 1993 (Vic)* and s18 of the *Building Act 2016 (Tas)*.

Report<sup>45</sup> is also developing a framework for building product safety which includes recommendations to Ministers for a mandatory product certification scheme.

#### Issues for consideration

Building product safety laws are under development around the country as a result of persistent concerns about unsafe, non-compliant and counterfeit building products. It is not clear that recently introduced laws in NSW and QLD cover products containing flammable refrigerants. The current discussions and further potential reforms about building product safety may provide a useful opportunity for RA and other stakeholders to raise awareness of the issues around flammable refrigerants in the building industry. There may also be merit in advocating for products containing flammable refrigerant used in buildings to be expressly captured by building product safety laws.

## 4.9 Examples of the application of the regulatory groups

We set out below by way of example, the application of the regulatory groups to two specific areas, motor vehicle air conditioning systems and the substitution of refrigerants and retrofitting more broadly.

### *Motor vehicle air conditioning systems*

As a result of technological change, the refrigerant in mobile air conditioning systems is likely to change to R1234yf, an A2L refrigerant. As such most mechanics and others who work on such systems will handle the product. It is also understood that with the HFC phase-down a practice has emerged of retrofitting motor vehicle air conditioning systems with hydrocarbon refrigerants, including R290 (propane) and R600a (isobutane).<sup>46</sup>

The regulation of flammable refrigerants in motor vehicle air conditioning systems is regulated by WHS / OHS laws, any specific dangerous goods legislation that manages the storage and handling of the product (as exists in some jurisdictions), and the ACL. There are also licensing and registration requirements for those who work with vehicles or who handle flammable refrigerants generally – as discussed in part 4.5 above.

Given the increased use of flammable refrigerants in motor vehicles, the absence of regulation that specifically relates to either the handling of flammable refrigerants or its use in motor vehicles has the potential to be, or may be perceived to be, lacking. We also note it is only recently in 2019 that a guidance was published for the handling of flammable refrigerant in an automotive workshop application, with other guidelines tending to relate only to stationary air-conditioning and refrigeration systems.<sup>47</sup>

#### Issues for consideration

<sup>45</sup> Peter Shergold and Bronwyn Weir, February 2018.

<sup>46</sup> Flammable refrigerants and safety in automotive applications (2019), see [https://vasa.org.au/wp-content/uploads/2019/07/flammables\\_guide\\_WEB.pdf](https://vasa.org.au/wp-content/uploads/2019/07/flammables_guide_WEB.pdf)

<sup>47</sup> Flammable refrigerants and safety in automotive applications (2019), see [https://vasa.org.au/wp-content/uploads/2019/07/flammables\\_guide\\_WEB.pdf](https://vasa.org.au/wp-content/uploads/2019/07/flammables_guide_WEB.pdf), Introduction.

The recent introduction of guidance for the handling of flammable refrigerants in automotive applications is likely to mitigate risks. Finding ways to ensure that motor mechanics and others are aware of and apply the guidance is the next step toward reducing risks.

### *Substitution of refrigerants and retrofitting*

With the shift to low GWP refrigerants, it is not uncommon for systems incorporating fluorocarbon refrigerants to be substituted with flammable refrigerants. This may occur in air conditioner systems for motor vehicles as discussed above, as part of maintenance or repair work, or as an after market substitution. If the replacement refrigerant is the same safety classification it may be able to be simply be 'dropped in', however where flammable refrigerants (i.e. A2L or A3) replace non-flammable refrigerants (i.e. A1), the system needs to be converted.

Substituting refrigerants and retrofitting equipment to incorporate flammable refrigerant raises clear safety issues. The only licensing requirements that directly regulate the recovery or replacement of refrigerants are the ARCTick licensing scheme, which would apply where the refrigerant being recovered is a fluorocarbon within the scope of the ozone protection legislation, and the QLD regime for the regulation of hydrocarbons (discussed above at 4.5). The QLD framework also includes controls to address the risks of substituting products, such as a requirement for safety reports that form part of applications for the approval of gas devices that use flammable hydrocarbon gas. These reports address the risks of installing gas in a device that was originally designed for use with a non-flammable gas.<sup>48</sup> Further, where flammable hydrocarbon gas is installed a plate must be fixed to the device stating that it contains flammable gas.<sup>49</sup>

Beyond QLD, the WHS / OHS laws regulate the recovery and substitution of refrigerant to the extent it occurs in a workplace setting. The legislation does not refer to the specific activities of recovery or substitution. However, the joint position paper developed by the Heads of Workplace Safety Authorities in Australia provides guidance.<sup>50</sup> In relation to changing to a more flammable refrigerant, the position paper states:

*"Where an alternative refrigerant is being considered, the compatibility of this refrigerant with the system **must** be assessed and documented by a competent person prior to the substitution. A person changing a refrigerant to a more flammable refrigerant takes on a role similar to that of a designer of a refrigeration system. For example, for a fixed system a refrigeration engineer **must** assess the suitability of the system for use with the alternative refrigerant, and ensure compliance with relevant standards including AS/NZS 5149, and the AS/NZS 3000 and other electrical standards."*

This indicates that a person who substitutes or retrofits a system to incorporate a flammable refrigerant takes on a designer's responsibilities and liabilities. The position paper states that

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<sup>48</sup> r138(e), *Petroleum and Gas (Safety) Regulation 2018 (Qld)*.

<sup>49</sup> Ibid r135(1)(d). The person must also meet the other criteria of r135 which include holding a gas work licence and ensuring the device has been approved for use.

<sup>50</sup> "Flammable refrigerant gases position paper" (2018) – e.g. as published by Safe Work, <https://www.safework.nsw.gov.au/resource-library/hazardous-chemicals/flammable-refrigerant-gases-position-paper>.

designers must control risks including in relation to the flammability of the refrigerant.<sup>51</sup> It also makes clear that refrigeration systems should include labelling or signage specifying the refrigerant used.

While these are not mandatory requirements, as they are recommendations made by the regulators themselves there is an expectation that they will be followed. Compliance with the recommendations is likely to be considered by the regulator to amount to compliance with the legislative obligations.

The AIRAH industry guide on flammable refrigerants<sup>52</sup> also addresses refrigerant substitution. It provides that systems and equipment designed for use with CFCs, HCFCs or HFCs should not be converted to flammable refrigerants unless a range of criteria are met, including that the technician is trained to handle flammable refrigerants, the converted system complies with all applicable standards and requirements, and both the refrigerant and equipment manufacturer are contacted to advise on whether the conversion of this type of system is endorsed by them.<sup>53</sup> We note the final criterion, to contact the manufacturers, goes further than the guidance set out in the position paper. Again, these recommendations are not mandatory as the publication is an industry guide but may be considered in the event there was a complaint or issue.

#### **Issues for consideration**

The recent introduction of position paper to set standards for the recovery and substitution of refrigerant is likely to mitigate risks. Finding ways to ensure that stakeholders are aware of and apply the standards is the next step toward reducing risks. Mandating compliance with the position paper could also be a longer-term goal.

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<sup>51</sup> Ibid, Part 5.2.

<sup>52</sup> “Flammable Refrigerants” (2013), AIRAH, [Flammable Refrigerants](#)

<sup>53</sup> Ibid, part 1.3.

Appendices

Table 1: Regulation of flammable refrigerants – regulatory and other instruments

Table 1: Regulation of flammable refrigerants – regulatory and other instruments (as at 1 October 2020)

Jurisdiction	Regulatory instrument	Link to instrument	Type of instrument	Status of instrument	Description	Notes	Variations	Organisation	Organisation website	Contact details
ACT	Dangerous Goods (Road Transport) Act 2009	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road and rail, together with the Regulations.		See ADG Code (transport).	WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Dangerous Goods (Road Transport) Regulation 2010	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r9).  Sets out specific legal requirements for transporting dangerous goods by road. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 132281 E: worksafe@act.gov.au
ACT	Electrical Safety Act 1971	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Note ACT is transitioning to the EESS.			Chief Minister, Treasury and Economic Development Directorate – Access Canberra	<a href="https://www.accesscanberra.act.gov.au/">accesscanberra.act.gov.au</a>	T: 13 22 81 E (electrical inspections): electrical.inspections@act.gov.au
ACT	Electricity Safety Regulation 2004	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act. Note ACT is transitioning to the EESS.			Chief Minister, Treasury and Economic Development Directorate – Access Canberra	<a href="https://www.accesscanberra.act.gov.au/">accesscanberra.act.gov.au</a>	T: 13 22 81 E (electrical inspections): electrical.inspections@act.gov.au
ACT	Fair Trading (Australian Consumer Law) Act 1992	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Access Canberra	<a href="https://www.accesscanberra.act.gov.au/">www.accesscanberra.act.gov.au</a>	T: 13 2281 Online enquiry: <a href="https://www.accesscanberra.act.gov.au/app/ask/">https://www.accesscanberra.act.gov.au/app/ask/</a>
ACT	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">ACT Code</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">ACT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">ACT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">ACT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Work Health and Safety Act 2011	<a href="#">Act</a>	Act	Mandatory	Implements the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ACT	Work Health and Safety Regulation 2011	<a href="#">Regulations</a>	Regulations	Mandatory	Implements the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		WorkSafe ACT	<a href="https://www.worksafe.act.gov.au/">https://www.worksafe.act.gov.au/</a>	T: 13 22 81 E: worksafe@act.gov.au
ALL	*AS/NZS 60079.10.1 – Classification of area – Explosive gas atmospheres *AS/NZS 60079.14 – Explosive atmospheres – Electrical installations design, selection and erection *AS/NZS 60079.17 – Explosive atmospheres – Electrical installations inspection and maintenance A45 *AS/NZS 60079.29.2 – Explosive Atmospheres – Gas detectors – Selection, installation, use and maintenance of detectors for flammable gases and oxygen.	May be purchased from SAI Global	Standard	Voluntary	Sets out the requirements for the classification, design, maintenance and detectors in relation to explosive atmospheres and gas detectors.	Note referenced in the Petroleum and Gas (Safety) Regulation 2018.		Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="https://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 1216 – Class labels for dangerous goods	May be purchased from SAI Global	Standard	Voluntary	Details the labels for the classes, divisions and subsidiary risks of the storage and handling of dangerous goods (as per the ADG Code).	Information essentially as per the ADG Code.		Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="https://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 1482 – Electrical equipment for explosive atmospheres – Protection by ventilation – Type of protection	May be purchased from SAI Global	Standard	Voluntary	Specifies requirements for the protection by ventilation of electrical equipment in explosive atmospheres.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="https://www.standards.org.au/contact">www.standards.org.au/contact</a>



ALL	AS 2030.1 – Gas cylinders – General requirements	May be purchased from SAI Global	Standard	Voluntary	Specifies requirements for the design, verification and manufacture of all gas cylinders for the storage and transport of compressed, dissolved and liquefied gases, of water capacity ranging from 0.1 kg to 3000 kg.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 2931 – Selection and use of emergency procedure guides for the transport of dangerous goods	May be purchased from SAI Global	Standard	Voluntary	Provides guidance on the selection of the AS 1678 emergency procedure guides (EPGs) and group text emergency procedure guides (GTEPGs) required when transporting dangerous goods	Intended to be used in conjunction with the ADG Code.	See ADG Code	Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 4332 – The storage and handling of gases in cylinders	May be purchased from SAI Global	Standard	Voluntary	Specifies requirements and recommendations for the storage and handling of gases in cylinders, as classified as Class 2 dangerous goods in the ADG Code. Applies to all locations however will generally be industrial, commercial or rural in nature.		Applies to Class 2 dangerous goods as per the ADG Code.	Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 4343 – Pressure equipment – Hazard levels	May be purchased from SAI Global	Standard	Voluntary	Specifies criteria for determining the hazard levels of various types of pressure equipment to AS/NZS 1200.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS 4484 – Gas cylinders for industrial, scientific, medical and refrigerant use – Labelling and colour coding	May be purchased from SAI Global	Standard	Voluntary	Specifies the requirements for labelling and colour coding to identify the contents of compressed gas cylinders for industrial, scientific, medical and refrigerant gases, which are used in accordance with AS 2030, Parts 1, 2, 4 and 5.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 1200: 2015 Pressure equipment	May be purchased from SAI Global	Standard	Voluntary	Applies to flammable refrigerants to the extent they are used in relation to pressure vessels, e.g. as part of an air conditioning or refrigeration unit.  Sets out basic requirements and good practice for the design, materials, manufacture, examination, testing, installation, conformity assessment, commissioning, operation, inspection, maintenance, repair, alteration and disposal of pressure equipment (boilers, pressure vessels and pressure piping) but excluding gas cylinders.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 1596 – The storage and handling of LP gas	May be purchased from SAI Global	Standard	Voluntary	Specifies requirements and recommendations for the safe storage and handling of LP Gas, in cylinders and bulk tanks. Sets out requirements for design, construction, commissioning and operation of installations for the storage and handling of LP Gas.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 3000:2018 – Electrical installations ('Wiring Rules')	May be purchased from SAI Global	Standard	Mandatory as referenced in legislation	Applies to flammable refrigerants to the extent they are used in electrical equipment.  Specifies the essential safety requirements for low voltage electrical equipment (also known as the Australian / NZ Wiring Rules). Compliance can be demonstrated by compliance to the relevant product standards, AS/NZS 60335 is listed as being representative of product safety standards.  Referenced in state / territory electrical safety legislation.	Relates to low voltage equipment only - equipment within scope is equipment designed for use with a supply or output voltage not exceeding 1000 Volts for alternating current and 1500 Volts for direct current and intended for the purposes of generation, conversion, transmission, distribution or utilisation of electricity.		Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 3820:2009 Essential safety requirements for electrical equipment	May be purchased from SAI Global	Standard	Mandatory as referenced in electrical safety legislation	Applies to flammable refrigerants to the extent they are incorporated in electrical equipment.  Defines the essential safety requirements for low-voltage electrical equipment. Compliance to this standard is mandatory under electrical safety legislation and can be demonstrated by compliance to the relevant product statements. The AS/NZS 60335 series of Standards is listed in Appendix B of AS/NZS 3820 as being representative of suitable product safety standards.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 4761.1 – Competencies for working with electrical equipment for hazardous areas (EEHA) – Competency standards	May be purchased from SAI Global	Standard	Voluntary	Specifies the competencies required for persons to work with equipment and installations associated with explosive atmospheres and the performance and knowledge evidence required to assess and attribute competence.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 5149 Refrigerating systems and heat pumps – Safety and environmental requirements -AS/NZS 5149.1:2016 Part 1: Definitions, classification and selection criteria -AS/NZS 5149.2:2016 Part 2: Design, construction, testing, marking and documentation -AS/NZS 5149.3:2016 Part 3: Installation site -AS/NZS 5149.4:2016 Part 4: Operation, maintenance, repair and recovery	May be purchased from SAI Global	Standard	Voluntary	Applies to flammable refrigerants to the extent they are used in refrigerating systems.  Specifies the requirements for the safety of persons and property, provides guidance for the protection of the environment, and establishes procedures for the operation, maintenance, and repair of refrigerating systems and the recovery of refrigerants.  Applies to new refrigerating systems, extensions or modifications to already existing systems, fixed or mobile systems (except vehicle air conditioning systems covered by a specific product standard).	Does not apply to vehicle air conditioning systems.	Specifies requirements for systems types, locations, charge limits, etc.	Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>
ALL	AS/NZS 60335 series - Household and similar electrical appliances	May be purchased from SAI Global	Standard	Mandatory as referenced in AS3820, which is referenced in legislation	Applies to flammable refrigerants to the extent they are used in the appliances covered by the standard – includes vending machines, refrigerators, freezers, commercial refrigerating appliances, air conditioning and heat pumps.  Specifies general requirements for electrical household appliances. Listed in AS/NZS 3820 as representative of product safety standards.  Part 2 has particular requirements for appliances, the following may contain flammable refrigerant: -AS/NZS 60335.2.11 – Particular requirements for tumble dryers -AS/NZS 60335.2.24 – Particular requirements for refrigerating appliances, ice cream appliances and ice makers -AS/NZS 60335.2.34 – Particular requirements for motor compressors -AS/NZS 60335.2.40 – Particular requirements for electrical heat pumps, air conditioners and dehumidifiers -AS/NZS 60335.2.75 – Particular requirements for commercial dispensing appliances and vending machines -AS/NZS 60335.2.89 – Particular requirements for commercial refrigerating appliances with an incorporated or remote refrigerant condensing unit or compressor	Limited to household type appliances.		Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: <a href="http://www.standards.org.au/contact">www.standards.org.au/contact</a>

ALL	AS/NZS ISO 817:2016 Refrigerant - Designation and safety classification	May be purchased from SAI Global	Standard	Voluntary	Globally recognised refrigerant toxicity and flammability rating system.			Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>	T: 1800 035 822 Online enquiry: www.standards.org.au/contact
ALL	Australian Code for the Transport of Dangerous Goods by Road and Rail Edition 7.6 (ADG Code)	<a href="#">Code</a>	Code	Mandatory as referenced in legislation regarding transport of dangerous goods	<p>Applies to flammable refrigerants as they are classified as Class 2 Gases, Division 2.1: Flammable Gases (of Classes 1 – 9 covered by the Code). Some flammable refrigerants could be classified in Division 2.2: Toxic Gases – e.g. ammonia.</p> <p>Flammable gases are defined to be gases which at 20 °C and a standard pressure of 101.3 kPa: (i) are ignitable when in a mixture of 13 per cent or less by volume with air; or (ii) have a flammable range with air of at least 12 percentage points regardless of the lower flammability limit. Flammability should be determined by tests or by calculation in accordance with methods adopted by ISO (see ISO 10156:2010). Where insufficient data are available to use these methods, tests by a comparable method recognised by the competent authority may be used (paragraph 2.2.2.1).</p> <p>Details the technical requirements to transport dangerous goods by road or rail.</p> <p>Includes rules and recommendations covering:</p> <ul style="list-style-type: none"> <li>(a) the definition, classification, packaging, marking and labelling of substances and articles that meet the United Nations classification criteria for dangerous goods or are prescribed as dangerous goods by the competent authority;</li> <li>(b) the consigning of dangerous goods for transport, including loading, stowage, load retention and segregation;</li> <li>(c) the provision of transport documentation describing the dangerous goods being transported, and appropriate emergency information for those goods;</li> <li>(d) the unloading, receipt and transfer of dangerous goods;</li> <li>(e) the transport of dangerous goods; including the use of vehicles, containers and equipment, and the provision of safety equipment.</li> </ul> <p>ADG is given legal force in each jurisdiction by the laws regulating the transport of dangerous goods.</p>	*Note ADG and GHS systems operate in parallel - transport requires ADG labels, storage requires GHS labels. Safe Work Australia advises that the model WHS Regulations which provide for GHS pictograms may be substituted with correct ADG class labels, where both the GHS pictogram and ADG class label represent the same hazard (as per Safe Work Australia website). As such it is permissible for a refrigerant gas cylinder (in storage) not to have a GHS pictogram as long as they have the correct ADG pictogram. All the other GHS information and warnings are required. *Edition 7.7. of the Code may be used from 1 October 2020 (may be later in some jurisdictions) and is mandatory from 1 October 2021.	Classes gases as either flammable or non-flammable. Class 2.1 (flammable) gases include A2, A2L and A3 gases (class 2.2 is the non-flammable classification).  Table 3.2.3 Dangerous Goods List detailed individual flammable refrigerants and the relevant packing instructions and special provisions, and portable tank and bulk container instructions and special provisions. See from page 214 for Division 2.2 dangerous goods.	National Transport Commission (maintains and updates ADG Code)	<a href="https://www.ntc.gov.au/">https://www.ntc.gov.au/</a>	T: 03 9236 5000 E: enquiries@ntc.gov.au
ALL	Australian Institute of Refrigeration Air Conditioning and Heating (AIRAH) Flammable Refrigerants Safety Guide 2013	<a href="#">Guide</a>	Guide	Voluntary	<p>Provides practical guide on managing health and safety risks associated with the design, manufacture, installation, commission, service, use, decommission, dismantle and disposal for refrigerating and air conditioning equipment utilising flammable refrigerants.</p> <p>Note also update one, 2018.</p>	It does not cover vehicle air conditioning, transport refrigeration or the use of ammonia as a refrigerant.		Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH)	<a href="https://www.airah.org.au/">https://www.airah.org.au/</a>	T: 03 8623 3000 E: airah@airah.org.au
ALL	Civil Aviation Act 1998	<a href="#">Act</a>	Act	Mandatory	<p>Regulates the transport of goods by air - must carry goods as per the Regulations, reflects that the Regulations may adopt the Dangerous Goods List in the Technical Instructions.</p> <p>Supported by the Civil Aviation Safety Regulations 1998.</p>		As per the Technical Instructions.	Civil Aviation Safety Authority	<a href="https://www.casa.gov.au/">https://www.casa.gov.au/</a>	T: 131 757 E: dg@casa.gov.au
ALL	Civil Aviation Safety Regulations 1998	<a href="#">Regulations</a>	Regulations	Mandatory	<p>Applies to flammable refrigerants as they fall within the definition of 'dangerous goods', which are things specified in the Dangerous Goods List contained in ICAO DOC 9284 AN/905 - the Technical Instructions for the Safe Transport of Dangerous Goods by Air, issued by the International Civil Aviation Organization (Technical Instructions) (r92.015).</p> <p>Requires compliance with the Technical Instructions. Prescribes the minimum safety requirements for the consignment and carriage of dangerous goods by air. It includes training, documentation, record keeping and incident reporting as well as provisions for packaging, marking, labelling, loading of and stowage in aircraft (Part 92).</p> <p>Applies to persons, companies and operators who wish to consign or carry dangerous goods on aircraft, including airline operators, air freight industry including shipping of dangerous goods and freight forwarders and designated postal operators.</p>	*Part 92 of the Regulations is proposed to be amended, see CASA's Project OS 05/01 – Post-implementation review (PIR) of Part 92 of the Regulations. New regulations are proposed to bring changes to the Technical Instructions into effect and to update existing legislation to align with ICAO's standards and recommended practices (SARPS). The changes are also intended to address identifies deficiencies and seek to simplify the existing legislation. Consultation on the proposed changes occurred in December 2019.  See <a href="https://www.casa.gov.au/standard-page/project-os-0501-post-implementation-review-pir-casr-part-92">https://www.casa.gov.au/standard-page/project-os-0501-post-implementation-review-pir-casr-part-92</a>	As per the Technical Instructions.	Civil Aviation Safety Authority	<a href="https://www.casa.gov.au/">https://www.casa.gov.au/</a>	T: 131 757 E: dg@casa.gov.au
ALL	Competition and Consumer Act 2010 - Australian Consumer Law (Schedule 2)	<a href="#">Act</a>	Model law (ACL)	Mandatory	<p>Applies to flammable refrigerants to the extent they are used in equipment or form part of services provided to consumers that fall within the scope of the law – generally includes products and services that are sold, hired or leased for under \$40,000, or over \$40,000 that are normally bought for personal or household use.</p> <p>Incorporates the Australian Consumer Law (ACL) which provides consumer guarantees for the supply of goods and services. The ACL applies nationally as it is incorporated in state and territory laws so applies nationally.</p>			Australian Competition and Consumer Commission (ACCC)	<a href="https://www.accc.gov.au/">https://www.accc.gov.au/</a>	Online enquiry: <a href="https://www.accc.gov.au/contact-us/contact-the-accc/make-an-enquiry">https://www.accc.gov.au/contact-us/contact-the-accc/make-an-enquiry</a>
ALL	Competition and Consumer Regulations 2010	<a href="#">Regulations</a>	Regulations	Mandatory	Regulations made under the Act, gives some practical effect to some of the Australian Consumer Law (ACL) provisions.	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Australian Competition and Consumer Commission (ACCC)	<a href="https://www.accc.gov.au/">https://www.accc.gov.au/</a>	Online enquiry: <a href="https://www.accc.gov.au/contact-us/contact-the-accc/make-an-enquiry">https://www.accc.gov.au/contact-us/contact-the-accc/make-an-enquiry</a>
ALL	Dangerous, hazardous and harmful cargoes handbook	May be purchased from AMSA	Guide	Voluntary	<p>Applies to flammable refrigerants as they fall within the definition of dangerous goods for laws relating to transport by sea.</p> <p>Published by AMSA as a training aid and practical guide to compliance. Current version is 2018.</p>			Australian Maritime Safety Authority	<a href="#">Australian Maritime Safety Authority</a>	T: 1800 627 484 Online enquiry: <a href="https://www.amsa.gov.au/about/contact-us">https://www.amsa.gov.au/about/contact-us</a>

ALL	Electrical Equipment Safety Scheme (EESS)	<a href="#">EESS</a>	Other - regulatory framework	Mandatory (in jurisdictions in which have adopted it - all but NSW. Recognised by all jurisdictions)	<p>Applies to flammable refrigerants to the extent they are used in electrical equipment that is within the scope of the EESS - 'in-scope equipment'.</p> <p>Regulatory framework intended to be implemented consistently in all jurisdictions in Australia governing the sale of electrical equipment. Provides for a national database where suppliers and certain types of equipment must be registered and for use of a certification mark to show compliance with the system.</p> <p>Qld, Vic, WA and Tas have adopted the EESS. SA, NT and ACT are reportedly transitioning to the EESS (as per Electrical Regulatory Authorities Council website, accessed 15 October 2020). NSW has retained its own system of declared / non-declared classifications and requirements. However all jurisdictions in Australia recognise the EESS.</p>	Limited to 'in-scope' electrical equipment; does not cover second-hand equipment. Does not apply nationally – NSW has not adopted.	In-scope equipment includes air conditioners incorporating flammable (class 2 or 3 as per ISO 817) and non-flammable equipment.	Ministerial Oversight Committee – national policy and governance body for the EESS	<a href="https://www.eess.gov.au/">https://www.eess.gov.au/</a>	Online enquiry: <a href="https://www.eess.gov.au/about/contact-us/">https://www.eess.gov.au/about/contact-us/</a>
ALL	Flammable refrigerant gases – position paper	<a href="#">Position paper</a>	Guide	Voluntary	Position paper developed by the Heads of Workplace Safety Authorities around Australia to provide guidance on the obligations of WHS duty holders with respect to the use of flammable refrigerant gases in workplaces.	<p>*We have characterised it as a 'guide' although it is titled 'information sheet'</p> <p>*Given the position paper is developed by the Heads of Workplace Safety Authorities we have included it only once in this table as indicated it applies to all jurisdictions. We assume it has published in the same form in each jurisdiction.</p>	References different refrigerant types in a general sense, particularly A2 and A3.	All WHS/OHS Regulators		
ALL	Flammable refrigerants and safety in automotive applications (2019)	<a href="#">Guide</a>	Guide	Voluntary	<p>Applies to flammable refrigerants used in motor vehicles.</p> <p>Provides guidance to assist those working on or maintaining motor vehicle air condition systems to work safely where it is known or suspected that flammable refrigerants may be used.</p>			Refrigerant Reclaim Australia, VASA and GHD Engineering.	<a href="https://refrigerantreclaim.com.au/">https://refrigerantreclaim.com.au/</a>	Refrigerant Reclaim Australia (RRA) T: (02) 6230 5244 E: <a href="mailto:info@refrigerantreclaim.com.au">info@refrigerantreclaim.com.au</a>
ALL	Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	May be purchased from the UN	Other - system of classification	Mandatory - as referenced in WHS laws	<p>Applies to flammable refrigerants to the extent they are used or stored in a workplace.</p> <p>A United Nations system to standardise chemical classification, labelling and safety data sheets (SDS) internationally. Comprises a common set of pictograms, signal words, hazard and precautionary warnings.</p> <p>Adopted under WHS laws (not VIC and WA, although applies where supply to other states / territories). Workplace chemicals must be classified based on the GHS and where classified as hazardous chemical, a GHS based label and SDS must be prepared.</p>	<p>*From 1 January 2021, Australia will begin a 2 year transition from GHS 3 to GHS 7. (The transition was originally intended to start on 1 July 2020 however was delayed due to COVID-19. As such, businesses may classify and label chemicals in accordance with GHS 7 from 1 July 2020). During the transition either GHS 3 or GHS 7 may be used for classifications, labels and safety data sheets. Changes under GHS 7 include the existing flammable gas category (Category 1) will be split into two new categories (Flammable gas Category 1A and Category 1B).</p> <p>*Note ADG and GHS systems operate in parallel - transport requires ADG labels, storage requires GHS labels. Safe Work Australia advises that the model WHS Regulations which provide for GHS pictograms may be substituted with correct ADG class labels, where both the GHS pictogram and ADG class label represent the same hazard (as per Safe Work Australia website). As such it is permissible for a refrigerant gas cylinder (in storage) not to have a GHS pictogram as long as they have the correct ADG pictogram. All the other GHS information and warnings are required.</p>	Flammable gases are class 2 with two categories, 1 and 2.	United Nations	<a href="https://www.unece.org/info/ece-homepage.html">https://www.unece.org/info/ece-homepage.html</a>	W: <a href="https://www.unece.org/info/ece-homepage.html">https://www.unece.org/info/ece-homepage.html</a> Purchase: <a href="https://shop.un.org/series/global-ly-harmonized-system-classification-and-labelling-chemicals-ghs">https://shop.un.org/series/global-ly-harmonized-system-classification-and-labelling-chemicals-ghs</a>
ALL	ICAO DOC 9284 AN/905 - the Technical Instructions for the Safe Transport of Dangerous Goods by Air, issued by the International Civil Aviation Organization (Technical Instructions)	May be purchased from ICAO	Technical Instructions	Mandatory as referenced in legislation	<p>Contains detailed instructions for the safe international transport of dangerous goods by air. The broad principles governing the international transport of dangerous goods by air are contained in Annex 18 to the Convention on International Civil Aviation —The Safe Transport of Dangerous Goods by Air.</p> <p>Version 2021 is the current version.</p> <p>Referenced in the Civil Aviation legislation.</p>			International Civil Aviation Organization (ICAO)	<a href="https://www.icao.int/Pages/default.aspx">https://www.icao.int/Pages/default.aspx</a>	W: <a href="https://www.icao.int/Pages/default.aspx">https://www.icao.int/Pages/default.aspx</a>
ALL	International Maritime Dangerous Goods Code (IMDG Code)	May be purchased via the International Maritime Organization (IMO) website	Code	Mandatory (as referenced in regulations, Marine Order 41, also under SOLAS Convention - as per amendment procedure Article VIII)	<p>2018 edition. Uniform international code. Standard guide for the transport of dangerous goods by sea. Covers detailed recommendations for individual substances and advice on matters including packing, labelling and stowage.</p> <p>Referenced in Marine Order 41 (Carriage of dangerous goods) 2017.</p>		Includes requirements for different substances.	International Maritime Organization (IMO)	<a href="http://www.imo.org/EN/Pages/Default.aspx">http://www.imo.org/EN/Pages/Default.aspx</a>	E: <a href="mailto:info@imo.org">info@imo.org</a>
ALL	Marine Order 41 (Carriage of dangerous goods) 2017	<a href="#">Order</a>	Regulations	Mandatory	<p>Applies to flammable refrigerants as uses the definition of 'dangerous goods' as per the Navigation Act 2012.</p> <p>Sets out the requirements for the carriage of dangerous goods in packaged form. Requires compliance with the IMDG Code for the transport of dangerous goods by sea including loading, stowage, carriage and unloading, packing, marking, and labelling. Also covers training and documentation. (Also references Chapter VII of SOLAS).</p>			Australian Maritime Safety Authority	<a href="#">Australian Maritime Safety Authority</a>	T: 1800 627 484 Online enquiry: <a href="https://www.amsa.gov.au/about/contact-us">https://www.amsa.gov.au/about/contact-us</a>

ALL	Model Code of Practice: Labelling of workplace hazardous chemicals (July 2020)	<a href="#">Model Code</a>	Model Code	Voluntary	Provides practical guidance on how to correctly label hazardous chemicals used in the workplace. Model Code that may be adopted by jurisdictions via approval under their specific legislation.			Safe Work Australia (maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>
ALL	Model Code of Practice: Managing risks of hazardous chemicals in the workplace (July 2020)	<a href="#">Model Code</a>	Model Code	Voluntary	Provides practical guidance on how to manage health and safety risks associated with hazardous chemicals for PCBU who use chemicals in their workplace. Model Code that may be adopted by jurisdictions via approval under their specific legislation.	Note we have included in the table the model codes of practice (and their approval in jurisdictions) likely to directly apply to flammable refrigerants (Managing risk of hazardous chemicals in the workplace; Preparation of Material Safety Data Sheets; Managing risks of plant in the workplace; Labelling of workplace hazardous chemicals). Other model codes that cover broader concepts may also be of relevance, including managing electrical risks and managing the work environment and safety. Safe Work Australia have approved 23 codes (see <a href="https://www.safeworkaustralia.gov.au/">safeworkaustralia.gov.au</a> ). We have included a Qld Code that relates to both electrical safety and WHS laws, as it addresses both those regulatory areas.		Safe Work Australia (maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>
ALL	Model Code of Practice: Managing risks of plant in the workplace (May 2018)	<a href="#">Model Code</a>	Model Code	Voluntary	Provides practical guidance for persons who conduct a business or undertaking and have management or control of plant in the workplace, as well as to persons who install, construct and commission plant. Model Code that may be adopted by jurisdictions via approval under their specific legislation.	Note we have included in the table model codes of practice (and their approval in jurisdictions) likely to directly apply to flammable refrigerants (Managing risk of hazardous chemicals in the workplace; Preparation of Material Safety Data Sheets; Managing risks of plant in the workplace; Labelling of workplace hazardous chemical). Other model codes that cover broader concepts may also be of relevance, including managing electrical risks and managing the work environment and safety. Safe Work Australia have approved 23 codes (see <a href="https://www.safeworkaustralia.gov.au/">safeworkaustralia.gov.au</a> ). We have included a Qld Code that relates to both electrical safety and WHS laws, as it addresses both those regulatory areas.		Safe Work Australia (maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>
ALL	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals (July 2020)	<a href="#">Model Code</a>	Model Code	Voluntary	Provides practical guidance on how to prepare a safety data sheet for any hazardous chemicals that are being manufactured or imported for use, handling or storage. Model Code that may be adopted by jurisdictions via approval under their specific legislation.	Note we have included in the table the codes of practice (and their approval in jurisdictions) likely to directly apply to flammable refrigerants (Managing risk of hazardous chemicals in the workplace; Preparation of Material Safety Data Sheets; Managing risks of plant in the workplace; Labelling of workplace hazardous chemical). Other model codes that cover broader concepts may also be of relevance, including managing electrical risks and managing the work environment and safety. Safe Work Australia have approved 23 codes (see <a href="https://www.safeworkaustralia.gov.au/">safeworkaustralia.gov.au</a> ). We have included a Qld Code that relates to both electrical safety and WHS laws, as it addresses both those regulatory areas.		Safe Work Australia (maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>
ALL	Model WHS Act	<a href="#">Model Act</a>	Model law	Model Law	Applies to flammable refrigerants and equipment incorporating flammable refrigerants to the extent they relate to a workplace.  Model Act that imposes duties to protect workers and others from harm by requiring duty holders to eliminate or minimise risk. Places a primary non-transferable duty of care on a person conducting a business or undertaking (PCBU). Duties are also imposed on others including managers who control a workplace and workers, and 'upstream' PCBU's being the designers, manufacturers, importers, suppliers, and people installing, constructing or commissioning plant or structures to ensure that their products are safe.	*Adopted in all jurisdictions aside from VIC and WA. *Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system. *Review of the content and operation of the model WHS laws was conducted in 2018. Safe Work Australia states (on its website, accessed 13 October 2020) that it is consulting on the impacts of the recommendations in the Review of the model WHS laws: Final Report (December 2018).		Safe Work Australia (Model WHS Act maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>

ALL	Model WHS Regulations	<a href="#">Model Regulations</a>	Model law	Model Law	Applies to flammable refrigerants and equipment incorporating flammable refrigerants to the extent they relate to a workplace.  Model Regulations to accompany the Model Act.	*Adopted in all jurisdictions aside from VIC and WA. *Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system. *Review of the content and operation of the model WHS laws was conducted in 2018. Safe Work Australia states (on its website, accessed 13 October 2020) that it is consulting on the impacts of the recommendations in the Review of the model WHS laws: Final Report (December 2018).		Safe Work Australia (Model WHS Regulations maintained by). Government statutory body to develop national policy relating to WHS (and workers' compensation), jointly funded by the Cth, State and Territory governments through an Intergovernmental Agreement.	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: <a href="mailto:info@swa.gov.au">info@swa.gov.au</a>
ALL	Navigation Act 2012	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants as they fall within the definition of 'dangerous goods' – the Act references the meaning in Chapter VII of the International Convention for the Safety of Life at Sea (SOLAS) which classifies dangerous goods into 9 classes (with sub-classes) including Class 2 – Gases: compressed, liquefied or dissolved under pressure (Chapter VII, Regulation 2). (Safety Convention accessed via the Australian Treaty Series 1983 No 22 (1983) ATS 22).  Regulates the carriage of dangerous goods by sea, offences and civil penalties relating to passenger and cargo operations. Provides for regulations to make provisions as to dangerous goods.			Australian Maritime Safety Authority	<a href="#">Australian Maritime Safety Authority</a>	T: 1800 627 484 Online enquiry: <a href="https://www.amsa.gov.au/about/contact-us">https://www.amsa.gov.au/about/contact-us</a>
ALL	National Construction Code (2019 )		Code	Mandatory (as adopted by regulations in each jurisdiction)	National Construction Code, comprising the Building Code of Australia (Volumes One and Two) and the Plumbing Code of Australia (Volume Three) which prescribe provisions for the design and construction of buildings and building work.	Does not specifically cover the flammability of air conditioning and refrigeration systems within buildings is not specifically covered by the NCC. See further discussion in the report.		Australian Building Codes Board (office within the Department of Industry, Innovation and Science)	<a href="https://www.abcb.gov.au/">https://www.abcb.gov.au/</a>	T: 1300 134 631 Online enquiry form: <a href="https://www.abcb.gov.au/ABCB/Contact-Us/Contact-Us-Wizard">https://www.abcb.gov.au/ABCB/Contact-Us/Contact-Us-Wizard</a>
CTH	Work Health and Safety Act 2011	<a href="#">Act</a>	Act	Mandatory	Implementats the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		Comcare	<a href="https://www.comcare.gov.au/">https://www.comcare.gov.au/</a>	T: 1300 366 979 E: <a href="mailto:general.enquiries@comcare.gov.au">general.enquiries@comcare.gov.au</a>
CTH	Work Health and Safety Act Regulations 2011	<a href="#">Regulations</a>	Regulations	Mandatory	Implementats the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		Comcare	<a href="https://www.comcare.gov.au/">https://www.comcare.gov.au/</a>	T: 1300 366 979 E: <a href="mailto:general.enquiries@comcare.gov.au">general.enquiries@comcare.gov.au</a>
NSW	Building Products (Safety) Act 2017	<a href="#">Act</a>	Act	Mandatory	May apply to the unsafe use of proposed use of flammable refrigerants in equipment that is proposed to be or is installed in a building. See further discussion in the body of the report.  Regulates the use of unsafe building products in building and construction by providing for the identification, restriction and rectification of building products which pose a safety risk in buildings. Provides that a building product ban can be put in place on the use of a building product if the use could cause serious injury or death. The NSW Government has the power to investigate building products which may be unsafe for use. Can include requiring builders, suppliers, manufacturers and importers to produce records about products, and to have products analysed or tested to ensure they are safe for use.	May apply to equipment incorporating flammable refrigerants where installed in a building. See further discussion in report.		NSW Fair Trading	<a href="https://www.fairtrading.nsw.gov.au/">https://www.fairtrading.nsw.gov.au/</a>	T: 13 32 20 Online enquiry: <a href="https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry">https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry</a>
NSW	Dangerous Goods (Road and Rail Transport) Act 2008	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road and rail, together with the Regulations.		See ADG Code (transport).	SafeWork NSW and EPA (EPA website states that it regulates the transport of dangerous goods by road and by rail (in conjunction with the Office of the National Rail Safety Regulator). Safety Work NSW regulates activities prior to transport including packaging and labelling).	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>  EPA T: 131 555 E: <a href="mailto:info@epa.nsw.gov.au">info@epa.nsw.gov.au</a> Online enquiry: <a href="https://yoursay.epa.nsw.gov.au/epa-website-feedback">https://yoursay.epa.nsw.gov.au/epa-website-feedback</a>
NSW	Dangerous Goods (Road and Rail Transport) Regulation 2014	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of 'dangerous goods', which are defined as in the ADG Code (r9).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	SafeWork NSW and EPA (EPA website states that it regulates the transport of dangerous goods by road and by rail (in conjunction with the Office of the National Rail Safety Regulator). Safety Work NSW regulates activities prior to transport including packaging and labelling).	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>  EPA T: 131 555 E: <a href="mailto:info@epa.nsw.gov.au">info@epa.nsw.gov.au</a> Online enquiry: <a href="https://yoursay.epa.nsw.gov.au/epa-website-feedback">https://yoursay.epa.nsw.gov.au/epa-website-feedback</a>
NSW	Fair Trading Act 1987	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		NSW Fair Trading	<a href="https://www.fairtrading.nsw.gov.au/">https://www.fairtrading.nsw.gov.au/</a>	T: 13 32 20 Online enquiry: <a href="https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry">https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry</a>



NSW	Gas and Electricity (Consumer Safety) Act 2017	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Provides for NSW specific system of declared / non-declared classifications and requirements for electrical equipment.			NSW Fair Trading	<a href="https://www.fairtrading.nsw.gov.au/">https://www.fairtrading.nsw.gov.au/</a>	T: 13 32 20 Online enquiry: <a href="https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry">https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry</a>
NSW	Gas and Electricity (Consumer Safety) Regulation 2018	<a href="#">Regulation</a>	Regulation	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act, outlines safety standards and requirements for electrical appliances and installation. Note NSW specific system of declared / non-declared classifications and requirements for electrical equipment.			NSW Fair Trading	<a href="https://www.fairtrading.nsw.gov.au/">https://www.fairtrading.nsw.gov.au/</a>	T: 13 32 20 Online enquiry: <a href="https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry">https://www.fairtrading.nsw.gov.au/help-centre/online-tools/make-an-enquiry</a>
NSW	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">NSW Code</a>	Code	Voluntary	Approved model Code. Note dated August 2019, Model Code is July 2020 so may not include amendments made since then.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NSW	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">NSW Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NSW	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">NSW Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NSW	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">NSW Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NSW	Work Health and Safety Act 2011	<a href="#">Act</a>	Act	Mandatory	Implements the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NSW	Work Health and Safety Regulation 2017	<a href="#">Regulations</a>	Regulations	Mandatory	Implements the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		SafeWork NSW	<a href="https://www.safework.nsw.gov.au/">https://www.safework.nsw.gov.au/</a>	SafeWork NSW T: 13 10 50 Online enquiry form: <a href="https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form">https://www.safework.nsw.gov.au/resource-library/list-of-all-forms/html-forms/customer-service-centre-enquiry-form</a>
NT	Consumer Affairs and Fair Trading Act 1990	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Consumer Affairs	<a href="http://www.consumeraffairs.nt.gov.au">www.consumeraffairs.nt.gov.au</a>	T: 1800 019 319 E: consumer@nt.gov.au
NT	Electricity Reform (Safety and Technical) Regulations 2000	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act. Note NT is transitioning to the EESS.			NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Electricity Reform Act 2000	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Note NT is transitioning to the EESS.			NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">NT Code</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">NT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">NT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au

NT	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">NT Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Act 2010	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road and rail, together with the Regulations.		See ADG Code (transport).	NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Regulations 2011	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r4).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Work Health and Safety (National Uniform Legislation) Act 2011	<a href="#">Act</a>	Act	Mandatory	Implementats the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
NT	Work Health and Safety (National Uniform Legislation) Regulations 2011	<a href="#">Regulations</a>	Regulations	Mandatory	Implements the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		NT WorkSafe	<a href="https://worksafe.nt.gov.au/">https://worksafe.nt.gov.au/</a>	T: 1800 019 115 E: ntworksafe@nt.gov.au
QLD	Electrical Safety Act 2002	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Model EESS legislation (implementing the scheme in QLD and for other jurisdictions to adopt) - see Part 2A of the Act and Part 7 of the Regulations.			Electrical Safety Office (part of Office of Industrial Relations)	<a href="#">Electrical Safety Office</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Electrical Safety Code of Practice 2019: Managing electrical risks in the workplace	<a href="#">Code</a>	Code	Voluntary	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Provides guidance on managing electrical works in the workplace, having regard to electrical safety laws and WHS laws.	Note the Code is made under the Electrical Safety Act however is based on the model code of practice of the same name developed by Safe Work Australia, made under WHS legislation and addressing electrical safety in relation to WHS laws. This code provides guidance on electrical safety in relation to both the Electrical Safety Act and WHS laws. We have included this code because it addresses both these regulatory areas. We have not included the Safety Work Australia model code on electrical safety – or where it has been adopted by any jurisdictions – in this table, focussing on the WHS codes that tend to have a more direct application to flammable refrigerants (e.g. managing risks of hazardous chemicals in the workplace).		Electrical Safety Office (part of Office of Industrial Relations)	<a href="#">Electrical Safety Office</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Electrical Safety Regulation 2013	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act. Model EESS legislation (implementing the scheme in QLD and for other jurisdictions to adopt) - see Part 2A of the Act and Part 7 of the Regulations.			Electrical Safety Office (part of Office of Industrial Relations)	<a href="#">Electrical Safety Office</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Fair Trading Act 1989	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Qld Office of Fair Trading	<a href="http://www.qld.gov.au/law/fair-trading">www.qld.gov.au/law/fair-trading</a>	P: 13 74 68 Online enquiries: <a href="https://www.qld.gov.au/contact-us">https://www.qld.gov.au/contact-us</a>
QLD	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">Qld Code</a>	Code	Voluntary	Approved model Code. Note dated 2011, Model Code is July 2020 so may not include amendments made since then.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">Qld Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">Qld Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">Qld Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>

QLD	Petroleum and Gas (Production and Safety) Act 2004	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants as it regulates the use of hydrocarbon refrigerants.  Regulates the use of hydrocarbon refrigerants. This includes approval of refrigerating devices and licences to undertake gas work on the refrigeration device.  -A device that uses hydrocarbon refrigerants is a Type B gas device and is required to be approved before it is sold, installed or used. An appliance such as a refrigerator or an air conditioner that uses hydrocarbon refrigerants, e.g. R600, must be approved by a recognised Type B approving authority before it is sold, installed or used. -Anyone installing, removing, altering, repairing, servicing, testing or certifying the gas system of a device (i.e. charging, discharging or breaking into the refrigeration system that uses hydrocarbon refrigerants) must hold a gas work licence (hydrocarbon refrigerants) to do so.	*The Act and Regulation directly address the handling of hydrocarbon refrigerants. *Require a license to handle hydrocarbons. The only jurisdiction that requires a licence to handle some flammable refrigerants (in addition to the ARClick licensing scheme).	Applies to “flammable hydrocarbon gas”, defined in Schedule 7. It does not cover flammable refrigerants that are not hydrocarbons - .e.g R1234yf, a hydrofluoroolefin (HFO) classified as an A2L.	Resources Safety & Health Queensland (established 1 July 2020)	<a href="https://www.rshq.qld.gov.au/">https://www.rshq.qld.gov.au/</a>	E (petroleum and gas inspectorate): gassafe@rshq.qld.gov.au See further contact details: <a href="https://www.rshq.qld.gov.au/contact-us/petroleum-gas-inspectorate">https://www.rshq.qld.gov.au/contact-us/petroleum-gas-inspectorate</a>
QLD	Petroleum and Gas (Safety) Regulation 2018	<a href="#">Regulation</a>	Regulation	Mandatory	Made under the Petroleum and Gas (Production and Safety) Act 2004 - regulates the use of hydrocarbon refrigerants.	*The Act and Regulation directly address the handling of hydrocarbon refrigerants. *Require a license to handle hydrocarbons. The only jurisdiction that requires a licence to handle some flammable refrigerants (in addition to the ARClick licensing scheme).	Applies to “flammable hydrocarbon gas”, defined in Schedule 7. It does not cover flammable refrigerants that are not hydrocarbons - .e.g R1234yf, a	Resources Safety & Health Queensland (established 1 July 2020)	<a href="https://www.rshq.qld.gov.au/">https://www.rshq.qld.gov.au/</a>	E (petroleum and gas inspectorate): gassafe@rshq.qld.gov.au See further contact details: <a href="https://www.rshq.qld.gov.au/contact-us/petroleum-gas-inspectorate">https://www.rshq.qld.gov.au/contact-us/petroleum-gas-inspectorate</a>
QLD	Queensland Building and Construction Commission Act 1991	<a href="#">QBCC Act</a>	Act	Mandatory	May apply to the unsafe use of proposed use of flammable refrigerants in equipment that is proposed to be or is installed in a building. See further discussion in the body of the report.  Regulates the use of building products to ensure that products used on buildings are safe and for their intended purpose. Creates a chain of responsibility that provides all members of the building product supply chain are responsible for ensuring building products are compliant.	May apply to equipment incorporating flammable refrigerants where installed in a building. See further discussion in the report.		Queensland Building and Construction Commission	<a href="https://www.qbcc.qld.gov.au/">https://www.qbcc.qld.gov.au/</a>	T: 139 333 Online enquiries: <a href="https://my.qbcc.qld.gov.au/s/contactsupport">https://my.qbcc.qld.gov.au/s/contactsupport</a>
QLD	Queensland Code of Practice - Gas device approval authority holders (September 2020)	<a href="#">Code</a>	Code	Voluntary	Sets out conduct and technical obligations for holding a gas device approval authority in Queensland. Authorised under the Petroleum and Gas (Safety) Regulation 2018 (s128G(2)(a)).		As per the legislation.	Resources Safety & Health Queensland (established 1 July 2020)	<a href="#">RSHQ</a>	
QLD	Transport Infrastructure (Dangerous Goods by Rail) Regulation 2018	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r29).  Sets out specific legal requirements for transporting dangerous goods by rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Transport Infrastructure Act 1994	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road and rail, together with the Regulation.		See ADG Code (transport).	Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Transport Operations (Road Use Management - Dangerous Goods) Regulation 2008	<a href="#">Regulation</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r32).  Sets out specific legal requirements for transporting dangerous goods by road. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Transport Operations (Road Use Management) Act 1995	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road, together with the Regulation.		See ADG Code (transport).	Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Work Health and Safety Act 2011	<a href="#">Act</a>	Act	Mandatory	Implementation of model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
QLD	Work Health and Safety Regulation 2011	<a href="#">Regulation</a>	Regulations	Mandatory	Implementation of model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
SA	Dangerous Substances (Dangerous Goods Transport) Regulations 2008	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r11).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	Online Q&As: <a href="https://www.safeworkaustralia.gov.au/about-us/contact">https://www.safeworkaustralia.gov.au/about-us/contact</a> E: info@swa.gov.au	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): <a href="https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing">https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing</a>



SA	Dangerous Substances Act 1979	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants as 'dangerous goods'.  Regulates dangerous goods. Also see the Regulations.		See ADG Code (transport).	SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing
SA	Electricity (General) Regulations 2012	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act, defines legal safety and technical requirements for matters including electrical installations. Note SA is transitioning to the EESS.			Office of the Technical Regulator	<a href="#">OfficeTechnicalRegulatorSA</a>	T (general enquiries): 08 8226 5500 T (electrical enquiries - installation safety and wiring rules): 08 8226 5518 Online enquiry: https://forms.sa.gov.au/#/form/5a1374c3ad9c5a80446b4332/app/5f976f334d43314428eb6cb8
SA	Electricity Act 1996	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety, including establishing and enforcing standards. Note the EESS applies in SA.			Office of the Technical Regulator	<a href="#">OfficeTechnicalRegulatorSA</a>	T (general enquiries): 08 8226 5500 T (electrical enquiries - installation safety and wiring rules): 08 8226 5518 Online enquiry: https://forms.sa.gov.au/#/form/5a1374c3ad9c5a80446b4332/app/5f976f334d43314428eb6cb8
SA	Energy Products (Safety and Efficiency) Act 2000	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in equipment.  Regulates the safety and labelling of products, including offences relating to sale of products which are unsafe or not labelled correctly and a power to prohibit the sale or use of unsafe energy products. Note SA is transitioning to the EESS.			Office of the Technical Regulator	<a href="#">OfficeTechnicalRegulatorSA</a>	T (general enquiries): 08 8226 5500 T (electrical enquiries - installation safety and wiring rules): 08 8226 5518
SA	Energy Products (Safety and Efficiency) Regulations 2012	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems.  Made under the equivalent Act, regulates the safety and labelling of products. Note SA is transitioning to the EESS.			Office of the Technical Regulator	<a href="#">OfficeTechnicalRegulatorSA</a>	T (general enquiries): 08 8226 5500 T (electrical enquiries - installation safety and wiring rules): 08 8226 5518 Online enquiry: https://forms.sa.gov.au/#/form/5a1374c3ad9c5a80446b4332/app/5f976f334d43314428eb6cb8
SA	Fair Trading Act 1987	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Consumer and Business Services	<a href="http://www.cbs.sa.gov.au">www.cbs.sa.gov.au</a>	P: 13 18 82 Online enquiry: https://forms.sa.gov.au/#/form/5780e4f27c79ff278c3875af/app/5f9f68454d43310a50e3cbcc
SA	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">SA Code</a>	Code	Voluntary	Approved model Code. Note dated June 2020, Model Code is July 2020 so may not include amendments made since then.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.				
SA	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">SA Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing
SA	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">SA Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing

SA	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">SA Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): <a href="https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing">https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing</a>
SA	Work Health and Safety Act 2012	<a href="#">Act</a>	Act	Mandatory	Implementats the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): <a href="https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing">https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing</a>
SA	Work Health and Safety Regulations 2012	<a href="#">Regulations</a>	Regulations	Mandatory	Implements the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		SafeWork SA	<a href="https://www.safework.sa.gov.au/">https://www.safework.sa.gov.au/</a>	T: 1300 1300 365 255 E: help@safework@sa.gov.au Online enquiry form (licensing, dangerous goods/ substances, plant design and registration): <a href="https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing">https://www.safework.sa.gov.au/about-us/contact-us/contact-us-licensing</a>
TAS	Australian Consumer Law (Tasmania) Act 2010	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Consumer, Building and Occupational Services	<a href="https://www.cbos.tas.gov.au/">https://www.cbos.tas.gov.au/</a>	T: 1300 654 499 E: CBOS.info@justice.tas.gov.au
TAS	Dangerous Goods (Road and Rail Transport) Act 2010	<a href="#">Act</a>	Act	Mandatory	Regulates the transport of dangerous goods by road and rail. Also see the Regulations.		See ADG Code (transport).	WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
TAS	Dangerous Goods (Road and Rail) Transport Regulations 2010	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (r9).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
TAS	Electricity Industry Safety and Administration Act 1997	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Note the EESS applies in TAS.	Note proposed legislative reform, Electricity Safety Bill 2020 is currently before the Tas Parliament. Provides for the consolidation of all electricity safety requirements and to address the EESS (although the EESS is already adopted in Tas, following Tas signing the inter-governmental agreement). Consultation occurred in early 2020, as at 12 October the Bill had been introduced and read for the first time in the lower house on 23 September 2020.		Electricity Standards and Safety - Consumer, Building and Occupational Services	<a href="https://www.cbos.tas.gov.au/">https://www.cbos.tas.gov.au/</a>	T: 1300 654 499 E: CBOS.info@justice.tas.gov.au
TAS	Model Code of Practice: Labelling of workplace hazardous chemicals	<a href="#">Tas Code</a>	Code	Voluntary	Approved model Code. Note stated to be effective on and from December 2018, Model Code is July 2020 so may not include amendments made since then.	Note we have not compared the model code against this specific approved code to identify the extent of any differences.	WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au	
TAS	Model Code of Practice: Managing risks of hazardous chemicals in the workplace	<a href="#">Tas Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
TAS	Model Code of Practice: Managing risks of plant in the workplace	<a href="#">Tas Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared this approved code against the model code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – May 2018.		WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
TAS	Model Code of Practice: Preparation of safety data sheets for hazardous chemicals	<a href="#">Tas Codes</a>	Code	Voluntary	Approved model Code.	Note we have not compared the model code against this specific approved code to identify the extent of any differences, we assume any variations are minor. We also assume the code reflects the current version of the model code – July 2020.		WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
TAS	Work Health and Safety Act 2012	<a href="#">Act</a>	Act	Mandatory	Implements the model WHS Act.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au

TAS	Work Health and Safety Regulations 2012	<a href="#">Regulations</a>	Regulations	Mandatory	Implements the model WHS Regulations.	Applies to workplaces. Only applies in domestic environments when work is being conducted - i.e. installation / servicing of a refrigeration system.		WorkSafe Tasmania	<a href="https://www.worksafe.tas.gov.au/">https://www.worksafe.tas.gov.au/</a>	T: 1300 366 322 E: wstinfo@justice.tas.gov.au
VIC	Australian Consumer Law and Fair Trading Act 2012	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).	In some jurisdictions there are also regulations made under the Act which incorporates the ACL. We have not included the regulations as the ACL is the key regulatory instrument.		Consumer Affairs Victoria	<a href="http://www.consumer.vic.gov.au">www.consumer.vic.gov.au</a>	T: 1300 558 181 General enquiries: <a href="https://www.consumer.vic.gov.au/contact-us/resolve-your-problem-or-complaint/when-we-get-involved-with-a-problem-or-complaint/general-enquiry">https://www.consumer.vic.gov.au/contact-us/resolve-your-problem-or-complaint/when-we-get-involved-with-a-problem-or-complaint/general-enquiry</a>
VIC	Code of practice - The storage and handling of dangerous goods	<a href="#">Vic Code</a>	Code	Voluntary	Provides practical guidance on how to comply with OHS legislation and Dangerous Goods (Storage and Handling) Regulations 2012 for the safe storage and handling of dangerous goods.	Relates to OHS and dangerous goods storage and handling regulations.		WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Compliance code - Hazardous substances	<a href="#">Vic Code</a>	Code	Voluntary	Provides practical guidance on how to comply with obligations OHS legislation for the use of hazardous substances.			WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Compliance code - Plant	<a href="#">Vic Code</a>	Code	Voluntary	Provides practical guidance on how to comply with obligations under OHS legislation regarding plant.	The model code re managing risks of plant in the workplace as Vic has OHS laws, although as assume the detail is very similar given the similarity between the WHS laws and Vic's OHS legislation.		WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Dangerous Goods (Storage and Handling) Regulations 2012	<a href="#">Regulations</a>	Regulations	Mandatory	Made under the Dangerous Goods Act 2011. Applies to flammable refrigerants as dangerous goods.  Provides for the storage and handling of dangerous goods including the licensing of dangerous goods sites.	Note may be overlap with OHS laws as the regulation of 'hazardous substances' may also apply. R12 notes that compliance with the OHS Regulations is sufficient for the purposes of some aspects of these regulations.		WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Dangerous Goods (Transport by Road or Rail) Regulations 2018	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of 'dangerous goods', which are defined as in the ADG Code (with some variations) (r38).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Dangerous Goods Act 1985	<a href="#">Act</a>	Act	Mandatory	Regulates dangerous goods. Also see the Regulations.		See ADG Code (transport).	WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Electricity (Safety) General Regulations 2019	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act. Note the EESS applies in VIC.			Energy Safe Victoria	<a href="https://esv.vic.gov.au/">https://esv.vic.gov.au/</a>	T: 03 9203 9700 E: info@energysafe.vic.gov.au Electrical technical enquiries and installation safety: <a href="mailto:electricalinstallationenquiries@energysafe.vic.gov.au">electricalinstallationenquiries@energysafe.vic.gov.au</a> Electrical equipment safety: <a href="mailto:electricequipmentssafetyenquiries@energysafe.vic.gov.au">electricequipmentssafetyenquiries@energysafe.vic.gov.au</a>
VIC	Electricity Safety (Equipment Safety Scheme) Regulations 2019	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in equipment / systems within the scope of the EESS.  EESS legislation as per the model QLD legislation.			Energy Safe Victoria	<a href="https://esv.vic.gov.au/">https://esv.vic.gov.au/</a>	T: 03 9203 9700 E: info@energysafe.vic.gov.au Electrical technical enquiries and installation safety: <a href="mailto:electricalinstallationenquiries@energysafe.vic.gov.au">electricalinstallationenquiries@energysafe.vic.gov.au</a> Electrical equipment safety: <a href="mailto:electricequipmentssafetyenquiries@energysafe.vic.gov.au">electricequipmentssafetyenquiries@energysafe.vic.gov.au</a>
VIC	Electricity Safety Act 1998	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Note the EESS applies in VIC.			Energy Safe Victoria	<a href="https://esv.vic.gov.au/">https://esv.vic.gov.au/</a>	T: 03 9203 9700 E: info@energysafe.vic.gov.au Electrical technical enquiries and installation safety: <a href="mailto:electricalinstallationenquiries@energysafe.vic.gov.au">electricalinstallationenquiries@energysafe.vic.gov.au</a> Electrical equipment safety: <a href="mailto:electricequipmentssafetyenquiries@energysafe.vic.gov.au">electricequipmentssafetyenquiries@energysafe.vic.gov.au</a>

VIC	Equipment (Public Safety) Act 1994	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants as the legislation applies to ‘prescribed equipment’ as defined in the Regulations which includes pressures vessels within the meaning of AS/NZS 1200 Pressure equipment and pressure piping with a hazard level A, B, C or D as determined by AS 4343 Pressure equipment—Hazard levels (unless in relation to pressure piping, another Act imposes controls (see regulation 4 and regulation 5 for the definitions of terms ‘pressure equipment’, ‘pressure vessel’ and ‘pressure piping’). This will include pressure vessels relating to air conditioning and refrigeration.  Regulates high risk equipment used in non-work related settings (e.g. lifts in domestic premises). Imposes duties relating to the design, manufacture, importation, supply and use of prescribed equipment to ensure public safety. Applies to non-workplaces (except a workplace used for the manufacture, construction, maintenance or repair of prescribed equipment for use outside a workplace, or that prescribed equipment (see section 5). Broadly similar to the OHS Regulations' coverage of plant.	Similar legislative controls for non-workplaces are not replicated in other jurisdictions.		WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Equipment (Public Safety) Regulations 2017	<a href="#">Regulations</a>	Regulations	Mandatory	Made under the Equipment (Public Safety) Act - regulates high risk equipment used in non-work related settings.	*Similar legislative controls for non-workplaces are not replicated in other jurisdictions. *Regulations provide for prescribed equipment design notification. If the plant design is already registered under the OHS Regulations 2017, the EPS Regulations 2017 make it clear that there is no need to also notify a prescribed equipment design under the EPS Regulations. WorkSafe administers the two schemes in the same way and an application for plant design registration is also treated as a prescribed equipment design notification.		WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Occupational Health and Safety Act 2004	<a href="#">Act</a>	Act	Mandatory	Imposes duties about OH&S; principles are the same as the model WHS laws. Note the Victorian legislation was used as a framework for much of the model WHS laws.			WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
VIC	Occupational Health and Safety Regulations 2017	<a href="#">Regulations</a>	Regulations	Mandatory	Detailed requirements to support the OH&S Act.			WorkSafe Victoria	<a href="https://www.worksafe.vic.gov.au/">https://www.worksafe.vic.gov.au/</a>	T: 1800 136 089 Online enquiries: <a href="https://www.worksafe.vic.gov.au/speak-to-advisor">https://www.worksafe.vic.gov.au/speak-to-advisor</a>
WA	Control of Workplace Hazardous Substances	<a href="#">WA Code</a>	Code	Voluntary	Provides practical guidance on compliance with the OSH legislation regarding the labelling of substances.			WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Dangerous Goods Safety (Road and Rail Transport of Non-explosives) Regulations 2007	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as they fall within the definition of ‘dangerous goods’, which are defined as in the ADG Code (with some variations) (r8).  Sets out specific legal requirements for transporting dangerous goods by road and rail. Identifies the responsible industry employees in the transport of dangerous goods and imposes obligations and penalties (for failure of duty) on each of those in the land transport chain to ensure that dangerous goods are transported safely. The basis of the duties and responsibilities outlined are the technical requirements set out in the ADG Code – adopts by reference the ADG Code.		See ADG Code (transport).	WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants as it covers dangerous goods by reference to the dangerous goods list in the ADG Code (r8).  Provides for the storage and handling of dangerous goods including the licensing of dangerous goods sites.	Note the regulations include exclusions including for the transport of dangerous goods, dangerous that form part of the refrigeration system of refrigerated freight containers; compressed gases of certain limited quantities at a dangerous site that is not a workplace – r10 details the application of the regulations.		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Dangerous Goods Safety Act 2004	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants as it regulates dangerous goods including transport by vehicle (road, rail or water). Also see the Regulations.		See ADG Code (transport).	WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Dangerous Goods Safety Regulations 2007	<a href="#">Regulations</a>	Regulations	Mandatory	Made under the Act, Regulates the handling of dangerous goods. Also see Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007.	Note covers limited matters, Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007 provides detailed requirements.		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Electricity Act 1945	<a href="#">Act</a>	Act	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Regulates matters relating to electrical safety. Note the EESS applies in WA.			Energy Safety WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/building-and-energy/">https://www.commerce.wa.gov.au/building-and-energy/</a>	T: 08 6251 1900 E: energysafety@dmirs.wa.gov.au
WA	Electricity Regulations 1947	<a href="#">Regulations</a>	Regulations	Mandatory	Applies to flammable refrigerants to the extent they are used in electrical equipment / systems / installations.  Made under the equivalent Act. Note the EESS applies in WA.			Energy Safety WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/building-and-energy/">https://www.commerce.wa.gov.au/building-and-energy/</a>	T: 08 6251 1900 E: energysafety@dmirs.wa.gov.au

WA	Fair Trading Act 2010	<a href="#">Act</a>	Act	Mandatory	Incorporates the Australian Consumer Law (ACL).			WA Consumer Protection (Department of Mines, Industry Regulation and Safety)	www.consumerprotection.wa.gov.au	P: 1300 304 054 E: consumer@dmirs.wa.gov.au
WA	Labelling of Workplace Substances	<a href="#">WA Code</a>	Code	Voluntary	Provides practical guidance on compliance with the OSH legislation regarding the labelling of substances. Approved under the WA OSH Act (given WA has not adopted the model WHS laws) however is the same as the model code prepared by Safe Work.	Is the 2012 version of the model code, current model code is July 2020. We have not compared the two versions to identify the extent of any differences.		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	National Code of Practice for the labelling of workplace substances	<a href="#">WA Code</a>	Code	Voluntary	Approved Code of Practice.	Referred to as a National Code of Practice as it relates to the former <i>National Occupational Health and Safety Commission Act 1985 (Cth)</i> which is no longer in force. The WHS model laws now apply. Note they include a Model Code of Practice- labelling of workplace hazardous chemicals.		Workplace Health and Safety Queensland (part of Office of Industrial Relations)	<a href="https://www.worksafe.qld.gov.au/">https://www.worksafe.qld.gov.au/</a>	T: 1300 362 128 Online enquiry (WHS, electrical safety): <a href="https://fswqap.worksafe.qld.gov.au/whsq-enquiry/">https://fswqap.worksafe.qld.gov.au/whsq-enquiry/</a>
WA	Occupational Safety and Health Act 1984	<a href="#">Act</a>	Act	Mandatory	As with the model WHS legislation and the jurisdiction specific legislation that implements the model WHS laws, applies to flammable refrigerants and equipment containing flammable refrigerant to the extent they are used in the workplace.  Imposes duties about OH&S; principles are the same as the model WHS laws. Note reform is proposed to implement the model WHS Act and Regulations, a bill is currently before Parliament.	*Note proposed legislative reform to implement the WHS model laws - as at October 2020 the Work Health and Safety Bill 2019 is before Parliament, in the upper house Legislative Council (as per WA Parliament website, accessed 13 October 2020). There was also a public comment period on proposed regulations based on the model WHS Regulations in 2019. *Note the Mines Safety and Inspection Act 1994 (WA) also imposes duties in relation to occupational safety and health regarding mining operations and equipment (it is not included separately in this table).		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Occupational Safety and Health Regulations 1996	<a href="#">Regulations</a>	Regulations	Mandatory	Detailed requirements to support the OHS Act. Note reform is proposed to implement the model WHS Act and Regulations, a bill is currently before Parliament.	Note proposed legislative reform to implement the WHS model laws - as at October 2020 the Work Health and Safety Bill 2019 is before Parliament, in the upper house Legislative Council (as per WA Parliament website, accessed 13 October 2020). There was also a public comment period on proposed regulations based on the model WHS Regulations in 2019.		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au
WA	Preparation of Material Safety Data Sheets	<a href="#">WA Code</a>	Code	Voluntary	Provides practical guidance on compliance with the OSH legislation regarding the preparation of material safety data sheets. Approved under the WA OSH Act (given WA has not adopted the model WHS laws) however is the same as the model code prepared by Safe Work.	Is the 2012 version of the model code, current model code is July 2011. We have not compared the two versions to identify the extent of any differences.		WorkSafe WA (Department of Mines, Industry Regulation and Safety)	<a href="https://www.commerce.wa.gov.au/worksafe">https://www.commerce.wa.gov.au/worksafe</a>	T (building and energy division – building, electrical gas matters): 1300 489 099 E (building and energy division – building, electrical gas matters): be.info@dmirs.wa.gov.au

Table 2: Explanations / definitions of column headings used in Table 1

	Column heading	Options	Explanation / definition
A	Jurisdiction	ALL, CTH, ACT, QLD, SA, TAS NSW, NT, VIC, WA	Jurisdiction/s to which the instrument applies.
B	Regulatory instrument		Instrument name.
C	Link to instrument		Link to instrument where it is available without purchase or noting where it may be purchased.
D	Type of instrument	Act	Act of Parliament.
		Regulation/s	Regulations made by Parliament. Note includes Marine Orders made under the Navigation Act 2012 (s342) as they are defined as regulations.
		Code	Instrument named a code, generally provides detailed requirements (e.g. code of practice). It is not a law but can be referenced or adopted into law.
		Guide	Instrument named a guide, generally provides recommendations about best practice.
		Model Law / Code	Proposed laws agreed by relevant Ministers, often underpinned by an Intergovernmental Agreement committing each of the jurisdictions to enact their own laws mirroring the model. Model laws have no legal force in and of themselves, jurisdictions must pass their own laws to adopt them.
		Standard	Australian / New Zealand Standard, being a published document setting out specifications and procedures for products and systems that establish a minimum set of requirements which define quality and safety criteria.
		Other	Instrument that does not fall into one of the above categories.
E	Status of instrument	Mandatory	Compliance with the instrument is mandatory (e.g. acts and regulations).
		Mandatory as referenced in legislation	Compliance with the instrument is not in itself mandatory given the nature of the instrument (e.g. a code or standard) however as it is referenced or adopted in legislation it becomes mandatory (e.g. the legislation states that a specific act must be carried out in accordance with the instrument). Could also be referred to as a national law, where the law is incorporated around the country. We have applied this category when a standard is generally referenced in legislation, although there may be specific exemptions or other aspects of the standard do not apply – careful consideration of the legislation is required.
		Voluntary	Compliance with the instrument is voluntary (e.g. a guide or code of practice containing recommendations), although it may reference requirements of the legislation which are mandatory. Compliance with a voluntary instrument such as a code of practice issued by a regulator will generally amount to compliance with the legislation addressed in the code.
F	Description		High level description of the instrument including how it applies to flammable refrigerants – i.e. does the instrument directly reference flammable refrigerants as does they fall within a broader definition, such as ‘dangerous goods’.
G	Notes		Notes re instruments including regarding gaps and inconsistencies. Key gaps or other observations are discussed in the body of the report.
H	Variations		High level description of the extent to which there are variations to the regulation for different classifications of refrigerants.
I	Organisation		Organisation with responsibility for the instrument. For legislation this will be the regulator who administers the instrument.
J	Organisation website		Website of the relevant organisation.
K	Contact details		Contact details for the relevant organisation.



Figure 1: Overview of the regulatory landscape for flammable refrigerants

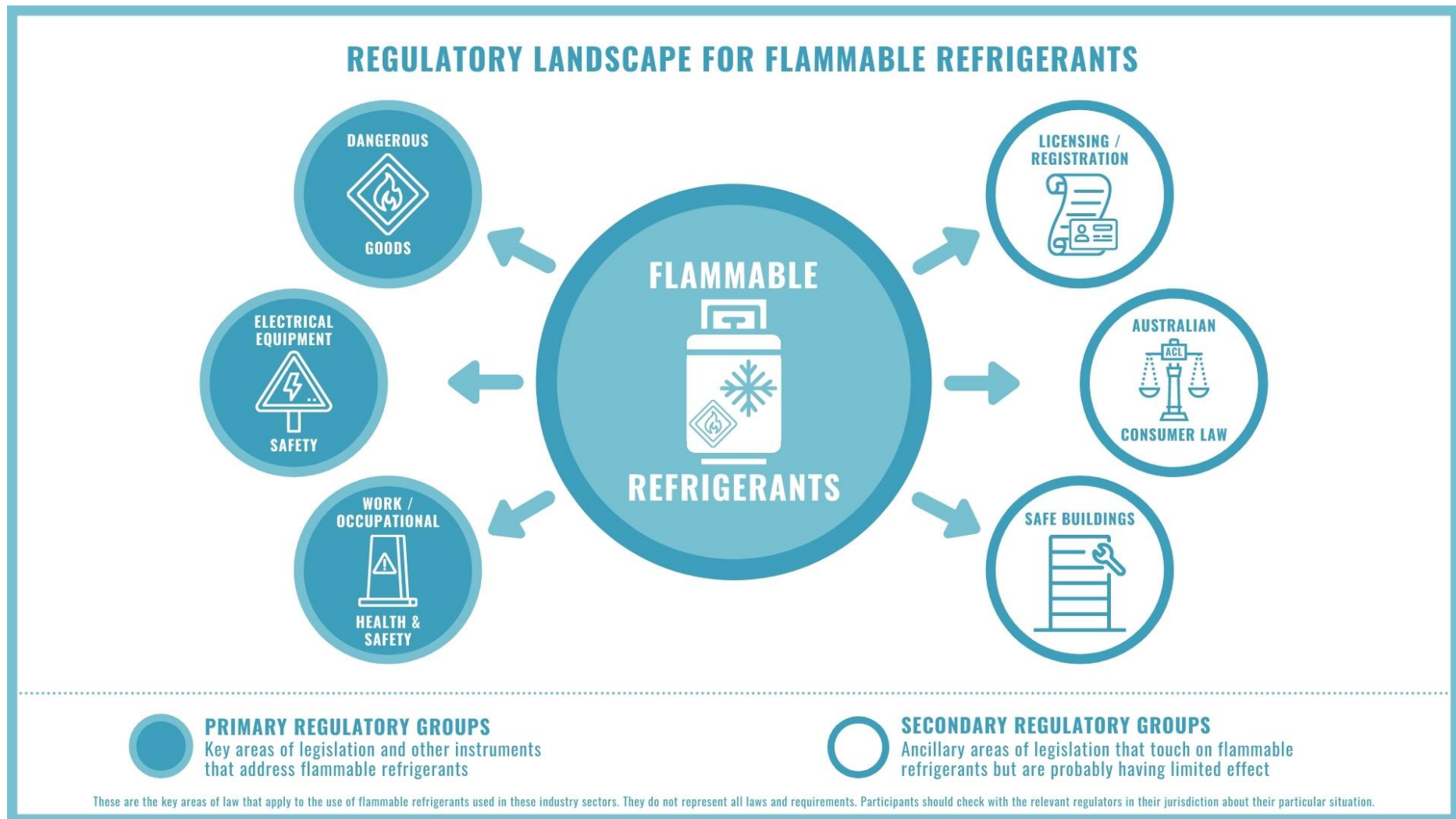


Figure 2: Regulatory landscape: motor vehicle air conditioning repair and modification

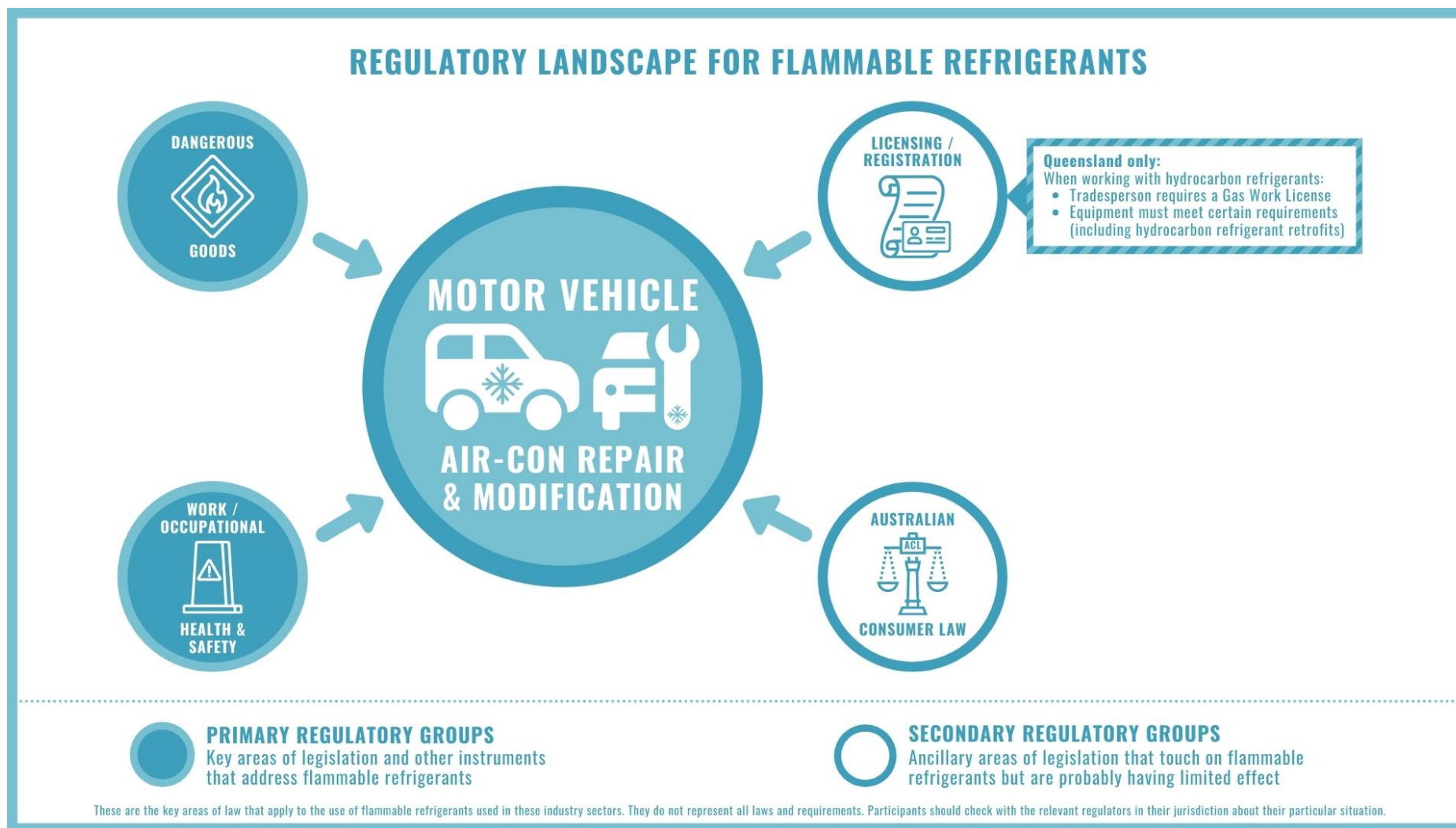




Figure 3: Regulatory landscape: residential air conditioning repair and modification

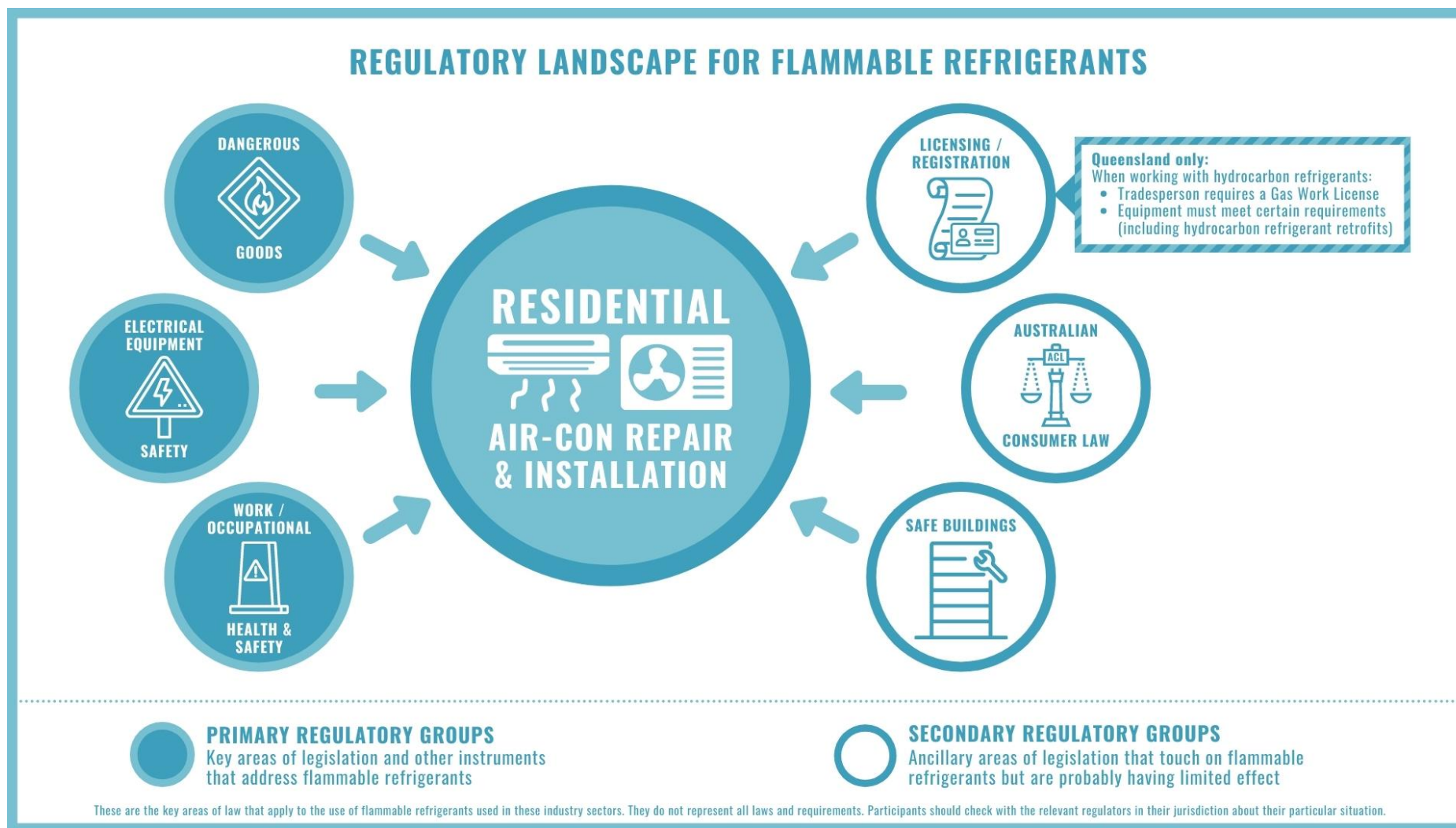


Figure 4: Regulatory landscape: commercial air conditioning repair and installation

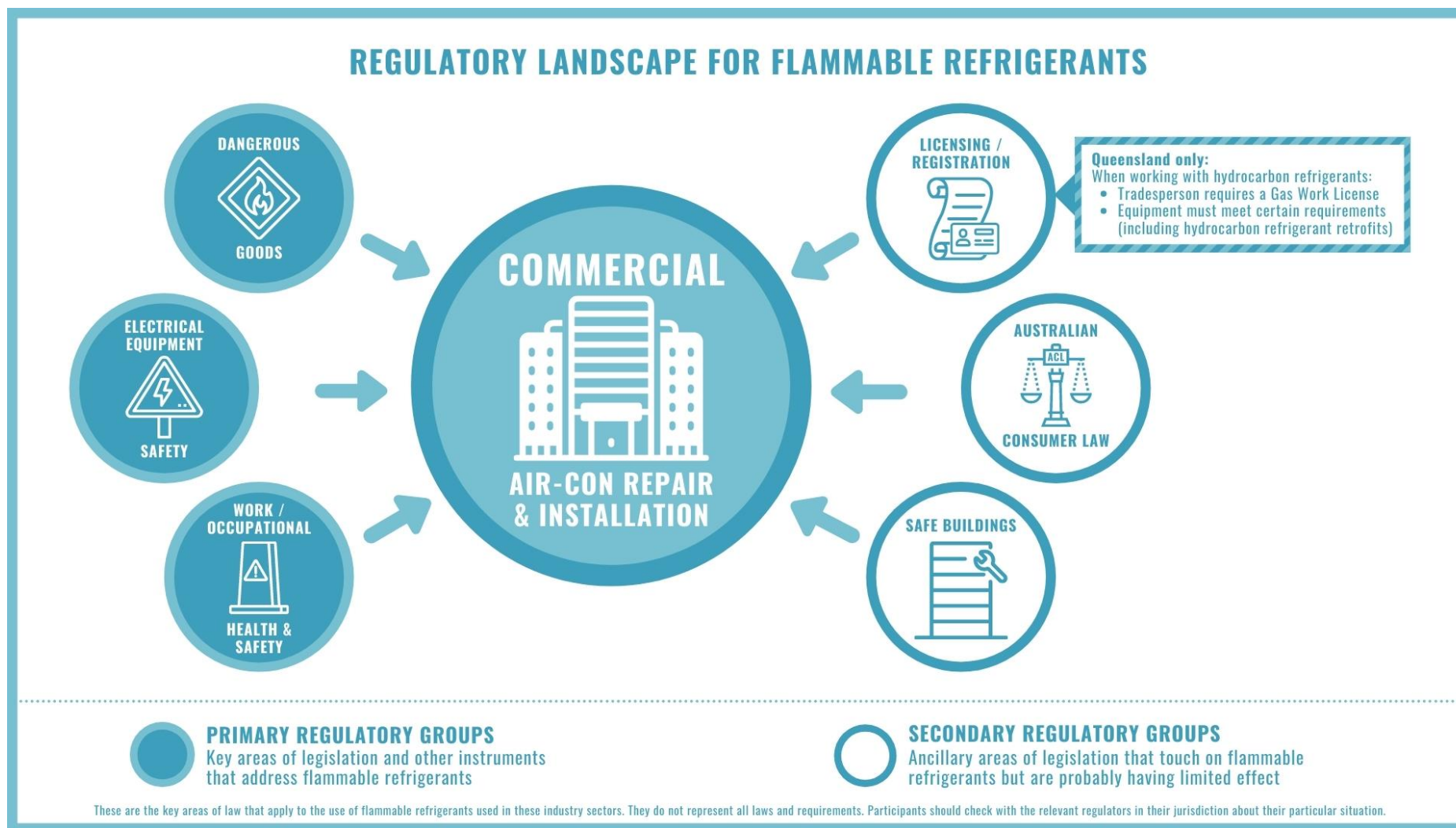


Figure 5: Regulatory landscape: commercial refrigeration repair and installation

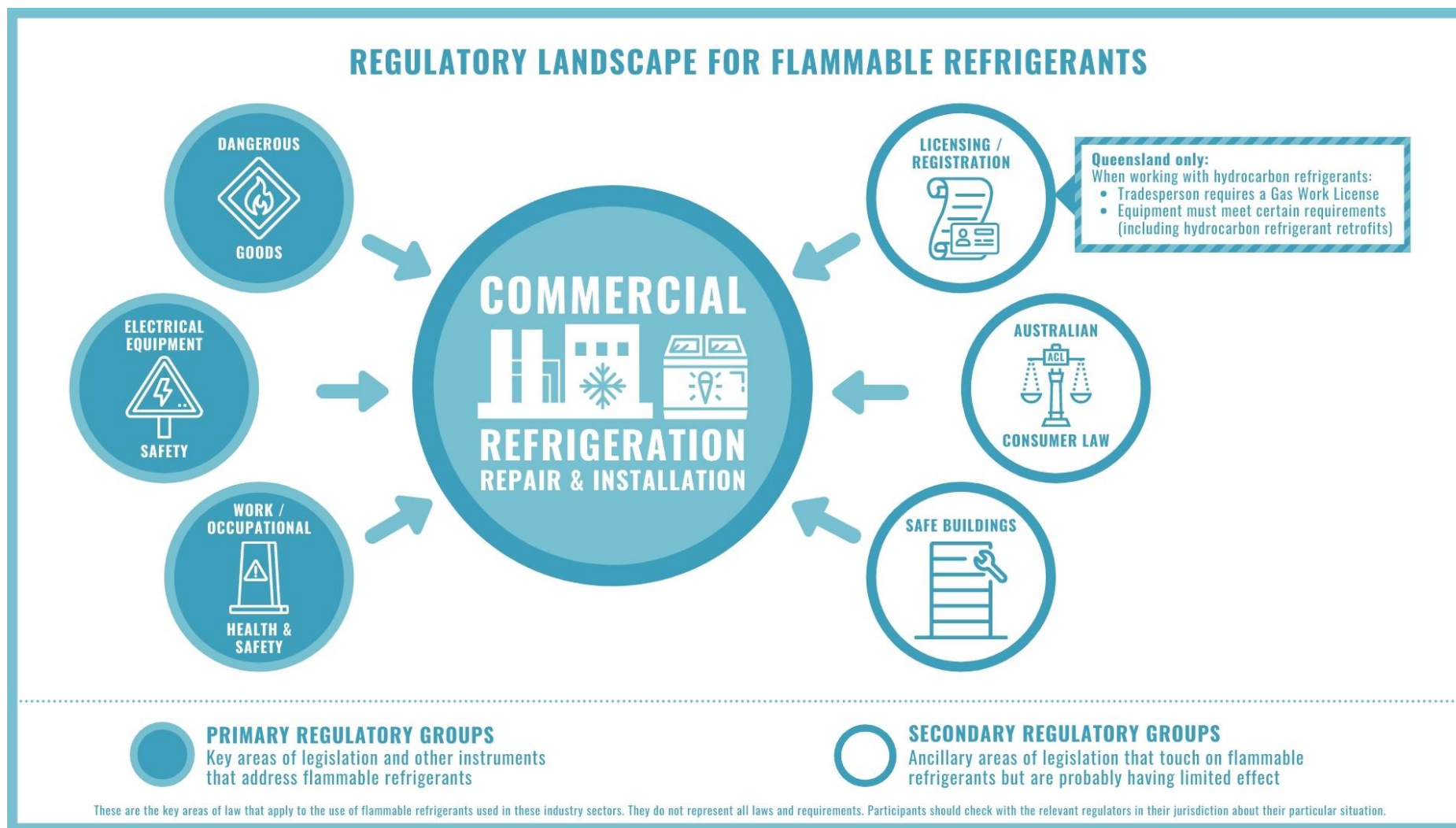




Figure 6: Regulatory landscape: HVACR equipment manufacturing

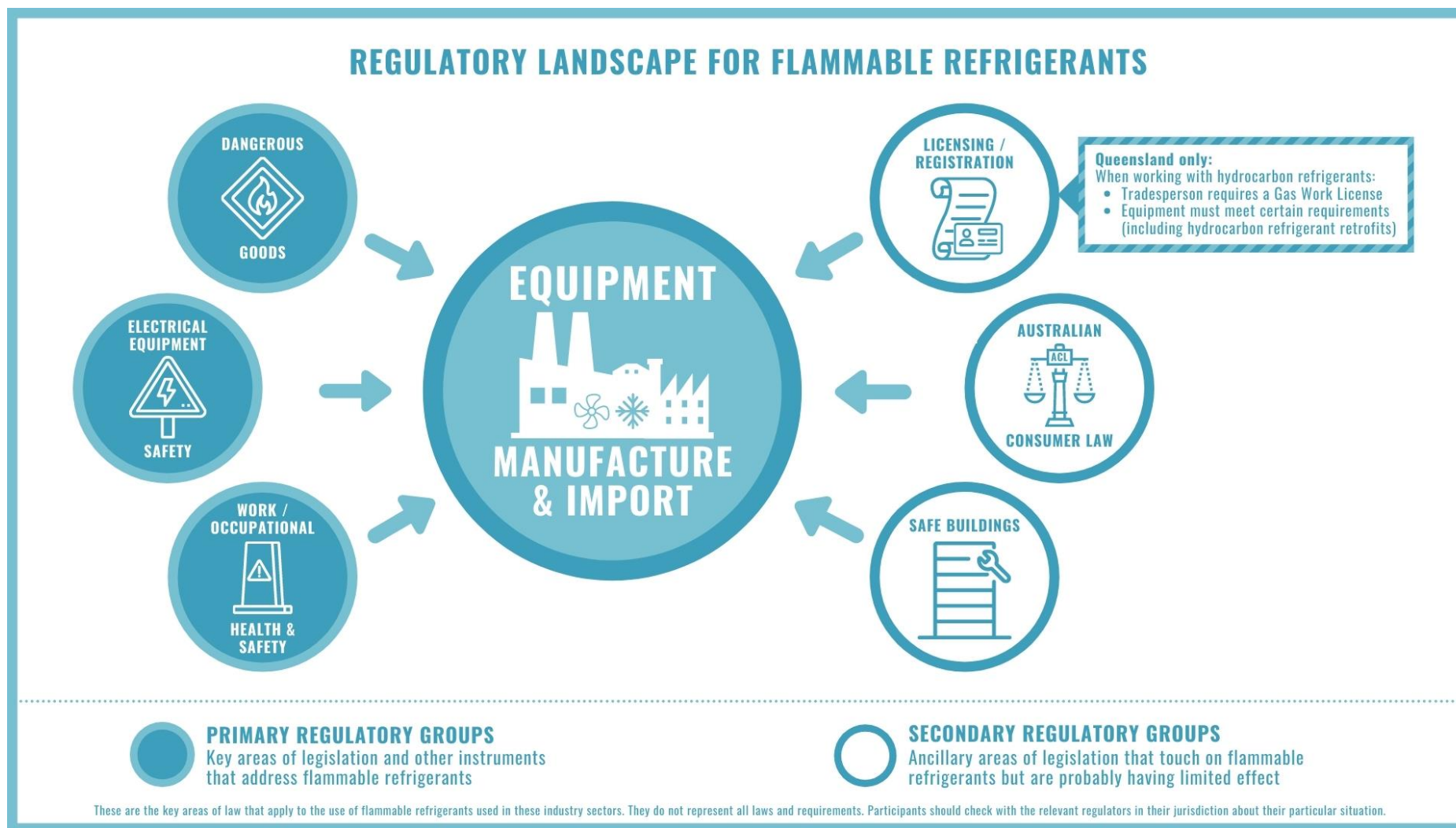


Figure 7: Regulatory landscape: wholesale of flammable refrigerant

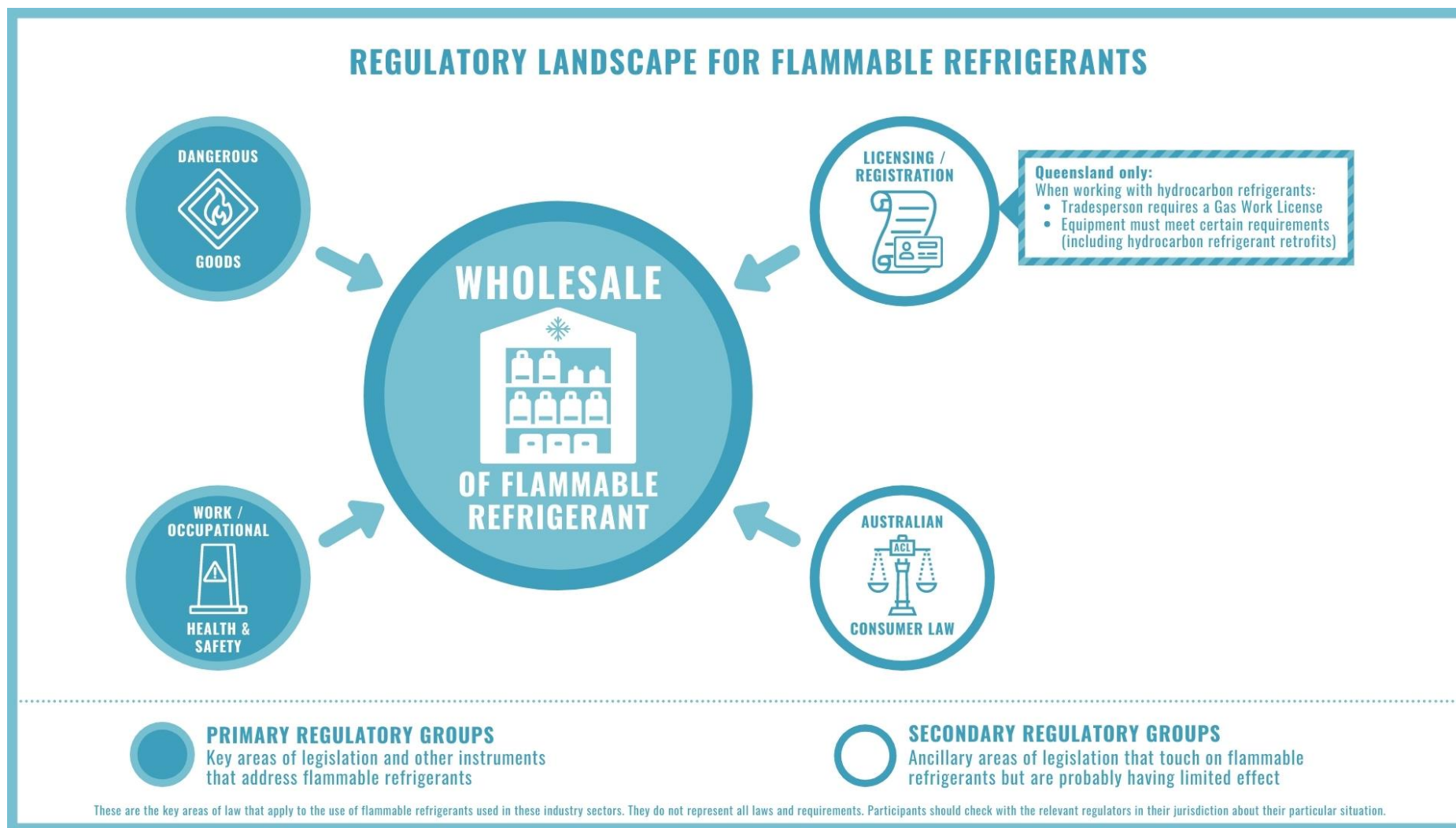


Table 3: Application of regulatory groups to key industries

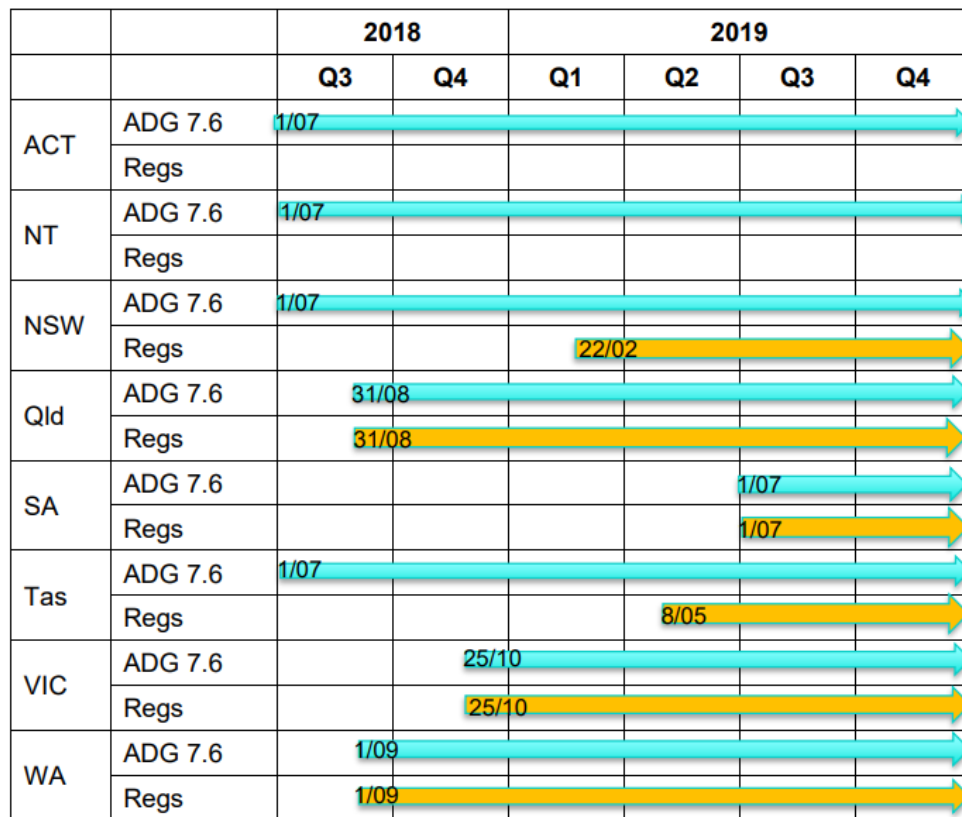
		Industry					
		Automotive	Domestic AC	Commercial AC&R	Wholesale	Import	Recovery
Regulatory group	WHS / OHS	✓	✓	✓	✓	✓	✓
	Electrical safety		✓	✓		✓	
	Dangerous goods	✓	✓	✓	✓	✓	✓
	Licensing	✓	✓	✓	✓	✓	✓
	ACL*	✓	✓	✓	✓	✓	✓
	Building regulation and building product safety		✓	✓			

\*Australian Consumer Law

## Figure 8: Jurisdictional comparison – commencement of amendments to the model regulations and ADG

Reproduction of Figure 3, National Transport Commission, “Examining the legal framework for the land transport of dangerous goods”, Issues paper, June 2020.

**Figure 3. Comparison of commencement of amendment package 5**



**Table 4: Jurisdictional comparison – licence / registration requirements for refrigeration and air conditioning work**

Licences or registrations required to carry out refrigeration or air conditioning work (excluding any licence or authorisation required under the ARCTick licensing scheme, and the restricted electrical licence requirements set out in Table 5).

	Licence or registration and area of work
<b>QLD</b>	<p><b>Gas work licence (hydrocarbon refrigerants)</b></p> <p>Covers carrying out work on the gas system of a refrigeration appliance. See Part 6 of the Act and Chapter 7 of the Regulation.</p>
<b>QLD</b>	<p><b>Air handling duct installation licence</b></p> <p>Covers work on air conditioning or mechanical ventilation systems, allows holders to install ductwork and enclosures for air conditioning, air handling and mechanical ventilation systems.</p>
	<p><b>Mechanical Services – Air-Conditioning and Refrigeration licences</b></p> <p>Covers mechanical services plumbing work. This includes the construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating or cooling system in buildings, such as air conditioning, refrigeration and air handling systems (there are some exceptions). It also includes certain design and preparation of plans and specifications of the above.</p> <p>Types of licences:</p> <ul style="list-style-type: none"> <li>• Mechanical Services – Air Conditioning and Refrigeration (Unlimited Design) licence - Applicable for contractor, nominee supervisor, site supervisor and company licences</li> <li>• Mechanical Services – Air Conditioning and Refrigeration (Limited Design) licence - Applicable for contractor, nominee supervisor, site supervisor and company licences</li> <li>• Mechanical Services – Air Conditioning and Refrigeration occupational licence - Applicable for occupational licence only</li> </ul>
<b>NSW</b>	<p><b>Licence class (related to contractor licence, supervisor certificate or tradesperson certificate) – air conditioning and refrigeration</b></p> <p>Covers air conditioning work and refrigeration work, including work to install, maintain and service air conditioning system and refrigeration systems.</p>



<b>SA</b>	<b>Builder's licence – air conditioning</b>  A general licence with a condition(s) to limit the scope of work, e.g. air conditioning.
<b>TAS</b>	<b>Mechanical Services Licence – class of plumbing licence</b>  Covers plumbing work on the construction, installation, replacement, repair, alteration, maintenance, testing or commissioning of a mechanical heating, cooling, ventilation or exhaust system in a building which is associated with the heating, cooling or ventilation of that building.
<b>VIC</b>	<b>Refrigerated Air Conditioning – class of plumbing licence</b>  Covers Refrigerated Air conditioning work (see Part 4 of the Plumbing Regulations). Includes installing and commissioning air conditioning systems, maintaining and repairing refrigerated air-conditioning systems and components.
	<b>Mechanical Services – class of plumbing licence</b>  Covers Mechanical Services work (see Part 4 of the Plumbing Regulations). Work includes installing, replacing, repairing and maintaining single head split systems, ceiling cassette systems and add-on condenser units for ducted systems.

**Table 5: Jurisdictional comparison – electrical licence / registration requirements for refrigeration or air conditioning work**

Licences or registration required to permit incidental or limited electrical work relating to refrigeration and air conditioning, such as the disconnection and reconnection of equipment.

	Electrical licence or registration	Legislation*
<b>ACT</b>	Restricted Electrician Licence – Electrotechnology systems refrigeration and air-conditioning	Construction Occupations (Licensing) Act 2004 <a href="#">Act</a> ; Construction Occupations (Licensing) Regulation 2004 <a href="#">Regulation</a>
<b>QLD</b>	Restricted Electrical Licence; endorsed for refrigeration and air conditioning	Electrical Safety Act 2002 <a href="#">Act</a> ; Electrical Safety Regulation 2013 <a href="#">Regulation</a>
<b>SA</b>	Restricted electrical worker registration	Plumbers, Gas Fitters and Electricians Act 1995 <a href="#">Act</a> ; Plumbers, Gas Fitters and Electricians Regulations 2010 <a href="#">Regulations</a>
<b>TAS</b>	Restricted Electrical Licence – refrigeration and air conditioning	Occupational Licensing Act 2005 <a href="#">Act</a> ; Occupational Licensing (Electrical Work) Regulations 2018 <a href="#">Regulations</a>
<b>NSW</b>	Licenses or certificates in air conditioning or refrigeration work also authorise the holder to perform associated electrical wiring.	Home Building Regulation 2014 <a href="#">Regulation</a> ; Home Building Act 1989 <a href="#">Act</a>
<b>NT</b>	Restricted Electrical Licence	Electrical Works and Contractors Act 1978 <a href="#">Act</a> ; Electrical Works and Contractors Regulations 1984 <a href="#">Regulations</a>
<b>VIC</b>	Restricted Electrical Worker's licence (REL).	Electricity Safety Act 1998 <a href="#">Act</a> ; Electricity Safety (Registration & Licensing) Regulations 2010 <a href="#">Regulations</a>
<b>WA</b>	Restricted electrical licence (REL) – refrigeration and air conditioning mechanic ('Refrigeration and Air-conditioning Mechanics Licence')	Electricity (Licensing) Regulations 1991 <a href="#">Regulations</a>

\*Note not all legislation included in this table is also included in Table 1, as Table 1 includes instruments which regulate flammable refrigerants which have a focus on mitigating safety or danger as opposed to legislation that could cover flammable refrigerants more generally, such as occupational licensing legislation which provides for restricted electrical licences.

## Appendix A: Consideration of building product safety legislation

This is a relatively high review only. Careful consideration of the relevant provisions and their context in the legislation as a whole would be required to reach a firm view and whether individual products would fall within each framework would depend, to a certain extent, on their specific characteristics or features.

### *QLD legislation*<sup>54</sup>

The key definitions are “building product” and “non-conforming building product”.

“Building product” is defined as “any material or other thing associated with, or that could be associated with, a building”.<sup>55</sup> “Associated with” is defined to mean “in relation to a building, means incorporated into, or connected to, a building by the carrying out relevant work”.<sup>56</sup> The definition of “relevant work” includes building work, or plumbing work directly connected to a building.<sup>57</sup> Some of those terms are also defined.

So, in a general sense, a product that is incorporated into or connected to a building by building or plumbing work is a building product covered by the legislation. This could cover the installation of an air conditioning system in an apartment building, which would include the installation of pipes within the walls (which notably would be covered by the NCC).

A building product is then a “non-conforming building product” for an intended use of the association of the product with the building will not be safe, will not comply with the relevant regulatory provisions (provisions under the building legislation and NCC), or will not perform to the standard to which it is represented<sup>58</sup>. The reference to “safe” is key. Safe is also a defined term and refers to removing, so far as reasonably practicable, all risks of injury or illness to a person.<sup>59</sup>

Having regard to these definitions, if a split system air conditioning system proposed to be installed in a building was to be charged with a flammable refrigerant it was not designed to use, it would raise safety issues and could potentially be considered to be a non-conforming building product.

### *NSW legislation*<sup>60</sup>

The NSW Act also regards building products to be materials that are, or could be, used in the construction of a building. “Building product” is defined to be “any product, material or thing that is, or could be, used in a building.”<sup>61</sup> A product is then said to be used in a building if it is incorporated into connected to, or otherwise installed in a building by means of building work.<sup>62</sup> Building work has a broad definition that refers to work involved in the construction and alterations to a building, but also has some exclusions.<sup>63</sup>

As with the QLD law, a split system air conditioning system could be covered by the legislation as it is incorporated into or connected to a building by means of building work.

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<sup>54</sup> *Queensland Building and Construction Commission Act 1991 (Qld)*.

<sup>55</sup> s74AB(1).

<sup>56</sup> s74AA.

<sup>57</sup> s74AA – note there is more detail in the definition.

<sup>58</sup> s74AB(2).

<sup>59</sup> s74AA.

<sup>60</sup> *Building Products (Safety) Act 2017 (NSW)*.

<sup>61</sup> s5.

<sup>62</sup> s7.

<sup>63</sup> s8.

Table 6: In-scope equipment for EESS – air conditioner and refrigerating appliance

Extract from in-scope electrical equipment definitions and risk levels for the Electrical Equipment Safety System (EESS) Current as of 21 September 2018 Version 2.0\*

Contents	Equipment type and definition	Risk level			Comment
		3	2	1	
	<b>Air conditioner incorporating flammable refrigerant</b>  An electrical appliance that— (a) is for household use; and (b) incorporates motor compressors; and (c) is an electrical appliance designed to provide delivery of conditioned air to an enclosed space, room or zone; and (d) includes a refrigeration system for cooling, heating or dehumidifying the air, including hydronic room fan coil type systems; and (e) is portable, transportable or fixed; and (f) uses refrigerant having a flammability classification of Class 2 or Class 3 in accordance with ISO 817. For refrigerant blends that have more than one flammability classification, the most unfavourable classification is taken.  <b>Class specification:</b> AS/NZS 60335.2.40	X			<i>Level 3 effective from 29 Jan 2017. Prior to this date was risk level 1.</i>
	<b>Air conditioner incorporating non-flammable or low flammable refrigerant</b>  An electrical appliance that— (a) is for household use; and (b) incorporates motor compressors; and (c) is an electrical appliance designed to provide delivery of conditioned air to an enclosed space, room or zone; and (d) includes a refrigeration system for cooling, heating or dehumidifying the air, including hydronic room fan coil type systems; and (e) is portable, transportable or fixed; and (f) uses a refrigerant having a flammability classification of Class 1 or Class 2L in accordance with ISO 817. For refrigerant blends that have more than one flammability classification, the most unfavourable classification is taken.		X		<i>Level 2 effective from 30 June 2018. Prior to this date was risk level 1.</i>
Note1 For example if a refrigerant blend has a flammability classification of A2/A2L then the blend is considered to be a flammable refrigerant and the appliance is as described in <a href="#">‘Air conditioner incorporating flammable refrigerant’</a>					
<b>Class specification:</b> AS/NZS 60335.2.40					

<b>Refrigerating appliance</b>  An electrical appliance that— (a) is a household type; and (b) cools and stores food.  <b>Class specification:</b> AS/NZS 60335.2.24	<b>x</b>			
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\* EESS website, [https://www.eess.gov.au/wp-content/uploads/2019/04/001-EESS\\_In-scope-equipment-definitions-and-risk-levels-v2.0.pdf](https://www.eess.gov.au/wp-content/uploads/2019/04/001-EESS_In-scope-equipment-definitions-and-risk-levels-v2.0.pdf) (accessed 15 October 2020)