

# Collision Repair Workshops

## Risk Management Note

The purpose of the Health and Safety at Work (Hazardous Substances) Regulations 2017 is to protect the environment and the health and safety of people and communities by preventing or managing the adverse effects of hazardous substances. This is now managed under the Health and Safety at Work Act 2015.

Collision repair workshops store and use significant quantities of hazardous substances, the majority of which are flammable, such as paints, thinners, solvents, methylated spirits, petrol, diesel, LPG and acetylene. These substances require storage and handling in compliance with legislative requirements.

This Note is a summary of and contains extracts from:

**Guide to Certification for Collision Repair Workshops under the HSNO Act 1996**

Produced by EPA (previously ERMA), published June 2009.

Below are some of the main areas to consider for certification under the Act as a minimum requirement. This is by no means prescriptive and will differ depending on individual requirements/operational issues.

### 1. Hazardous atmosphere zones

Hazardous atmosphere zones are required to be identified, established and maintained where the hazardous atmosphere zone threshold quantities for flammable liquids and gases are exceeded. These areas are identified so that the correct type of electrical equipment for the zone can be installed. Unintended ignition must be avoided.

- Zone 0** An explosive air-gas mixture is continuously present; or present for long periods, or frequently.
- Zone 1** An explosive air-gas mixture is likely to occur during normal operation only occasionally.
- Zone 2** An explosive air-gas mixture is not likely to occur in normal operation and, if it occurs, will persist for a short period only.

Electrical equipment must be installed and maintained in accordance with the Electricity Regulations 1997. An electrical certificate of verification must be kept, and this must include reports of periodic re-inspection by a competent electrical inspector.

### 2. Hazardous substances

The properties of hazardous substances are assessed against specific criteria to establish the hazard classifications. A substance can have more than one classification. Each is expressed in a similar format, eg

3.1A denotes:   **3** is the class  
                      **1** is the sub-class  
                      **A** is the hazard level ('A'= most hazardous)

A classification of 3.1A means a liquid that is highly flammable and a very high hazard. The classification progresses down the alphabet the less hazardous the substance becomes. Some substances have an additional sub class, eg LPG = 2.1.1A.

For each hazardous substance in the hazardous substances inventory, you must have the appropriate Safety Data Sheets (SDS's) These must be updated regularly and be readily accessible for reference (ie within ten (10) minutes).

### 3. Compliance certificate

A Compliance Certificate will be required for the storage of flammable liquids, gases, and oxidizers, where the threshold quantities are exceeded. Wherever practical it is advisable to maintain stocks below the threshold quantity to reduce the fire loading of the building and to avoid the need for a test certificate.

A certificate verifies that certain site features such as signage, hazardous atmosphere zones, emergency response plan etc are in place and being correctly managed.

For an accurate assessment of individual site requirements, the engagement of a Compliance Certifier will be required. They can be contacted via the EPA website at [www.epa.govt.nz](http://www.epa.govt.nz).

Individually, hazardous substances may be below their respective threshold quantities but, collectively, the total stored on site may still require a Compliance Certificate. Once obtained, the certificate will need to be prominently displayed or kept readily to hand if required by an enforcement officer or similar.

### 4. Site plans

Your workshop must have a site plan (or plans). To avoid confusion, separate hazardous atmosphere zones and controlled zone plans may be beneficial.

The site plan must show:

- the position of all hazardous materials in relation to the site boundary;
- the scale to which the plans have been drawn;
- any controlled zones associated with the hazardous substances;
- any hazardous atmosphere zones associated with the hazardous substances.

It is also advisable to show other pertinent information on your plan(s), such as:

- buildings within the site boundary;
- entry points into the buildings;
- date plan was drawn;
- location of emergency response equipment;
- site identification, including address.

## 5. Certified handlers

Where flammable liquids, aerosols, oxidizers, LPG, acetylene and other toxic substances exceed their threshold quantities, the substances must be under the control of a Person Conducting a Business or Undertaking (PCBU)/Certified Handler or secured so that unapproved persons cannot gain access to the substance. The hazardous substance can be handled by non-approved people when a Certified Handler/PCBU has provided them with guidance and they are available to provide advice and assistance.

You, as the person in charge, are responsible for making sure that approved handlers:

- are certified;
- remain competent in their responsibilities;
- are available when required.

Please note that an approved handler may be approved for different types of hazardous substances, lifecycle stages (ie manufacture, storage, use or disposal) or handling activities, depending on their work experience.

To be certified as an approved handler, you must have:

- knowledge of the Health and Safety at Work (Hazardous Substances) Regulations 2017.
- knowledge of the hazardous substances you are dealing with;
- practical skills (competency) to safely handle and use the hazardous substances;
- practical knowledge of the operating equipment involving the hazardous substance.

The preferred approach is to have an approved handler on-site at all times during operational hours.

A certificate is valid for five years and renewal is required via a Compliance Certifier. The approved handler will have to show continued competency, currency with updated Health and Safety at Work (Hazardous Substances) Regulations 2017, and any changes in codes of practice since the certificate was issued.

## 6. Emergency response plan

An emergency response plan is required when the substance threshold quantities are exceeded. This must cover the response to every reasonably likely emergency that could happen involving each hazardous substance. As the person in charge, you must make sure there is a plan in place and it is tested and up to date.

Each aspect of the plan must be tested at least once a year, and within three months of a significant change of staff or procedures. This must demonstrate that every procedure is workable and effective. Records of these must be kept for at least two years and be sighted by a Compliance Certifier prior to issuing a Compliance Certificate. Staff need to be trained for an emergency, especially if directly responsible for executing some part of the response plan when/if it is activated.

## 7. Fire extinguishers

Fire extinguishers are an important first aid fire fighting measure for any business operation. Where there are hazardous substances present, this is even more important.

The type of extinguisher present needs to be appropriate for the substances stored on the premises and for the quantities held. The person in charge is responsible for ensuring this is the case and that they are mounted, blazoned and serviced according to the appropriate New Zealand Standard NZS4503:2005 – Hand Operated Fire Fighting Equipment.

More may be required than specified under the Health and Safety at Work Regulations.

Sufficient extinguishers must be available so that there is at least one located and accessible within reasonable proximity of each hazardous substance. We suggest from five to fifteen (5-15) metres depending on the operation.

A regular maintenance regime by a qualified and competent contractor is extremely important.

## 8. Signage threshold quantities

Under the Act, specific signage is required when thresholds are exceeded. Often these quantities can be relatively low, but due to the volatility of the liquid/gas permitted quantities require extensive notification, eg petrol – fifty (50) litres.

Any signage present must have the following information:

- hazardous substances are present (signs do not have to mention specific substances, but it is recommended);
- general type and degree of hazard (signs must depict the type of hazards associated with the substance);
- steps to prevent unintended ignition (if the threshold quantity of a flammable substance is exceeded, signs must explain how to avoid unintended ignition);
- the action to be taken in an emergency.

Where hazardous substances are stored outside, signs must be displayed near the substance, ie on the diesel tank or the LPG cylinder or store.

Signs must be easy to read and understood from a distance of ten (10) metres. The EPA New Zealand approved code of practice for signage provides examples. If quantities of highly flammable or volatile substances are held, signage is required on all entry points to the site, front gate and offices, highlighting the hazard.

## 9. Secondary containment systems

Your workshop must have a secondary containment system if the quantity of hazardous substances present exceeds the threshold for emergency management. Gases do not require secondary containment.

This system must retain liquids should they escape from their container(s) in which they are stored. The system must be able to:

- retain any of the escaped liquids;
- allow the liquid to be recovered;
- withstand reasonably foreseeable events, such as fire.

A common form of secondary containment for packages is a compound, such as an impermeable concrete floor and bund walls. This may have a separately formed banded metal sheet for additional protection.

Flammable liquids in use (for example in the workshop) must have one hundred per cent (100%) secondary containment.

## 10. Storage of flammable liquids and gases

Up to two hundred and fifty (250) litres of flammable liquids (for example methylated spirits stored in a workshop) may be stored in a storage cabinet that is compliant with Australian Standard AS1940. The capacity of each container must be no greater than twenty (20) litres.

Note: Many businesses store flammable liquids/solvents in varying quantities. Such materials may give off vapours at relatively low temperatures, which can explode or ignite if they encounter an ignition source. Often these vapours have a specific gravity lower than air and are able to travel undetected for quite considerable distances to points of ignition.

It is the vapours/fumes that ignite, not the liquid itself. The ignited vapour may flashback to the container and heat the open surface of the liquid thus giving off more vapours, which continue to burn until the liquid is consumed, or the fire is extinguished. Fires involving flammable liquids are usually very intense and are difficult and dangerous to fight.



Figure 1 - An example of poor hazard management and an undesirable risk that insurers would be reluctant to take on.

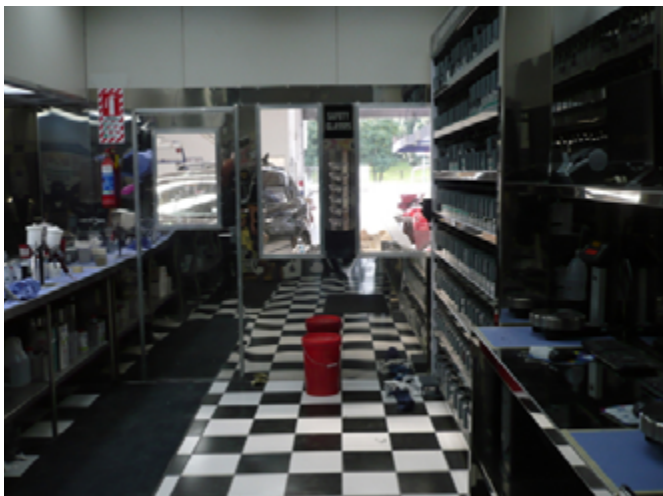


Figure 2 - An example of good hazard management - a compliant premises with good housekeeping.

## Disclaimer

The purpose of this Risk Management Note is to assist you to minimise potential loss from exposures which need prompt consideration. The Note does not imply that all other exposures were under control at the time of inspection.

The options contained in this Note are not intended to be a substitute for appropriate professional advice in relation to any matter. In achieving compliance with these items, fire protection equipment and systems should be installed to comply with the requirements of the relevant local, and/or Government authority. Any equipment installed should also comply with the requirements of the relevant New Zealand Standards and Codes.

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