Automotive Hazardous Substances Safety

General Safety

Hazardous Substances are a dangerous substance that can be a solid, liquid, or gas that can harm people, other living organisms, property, or the environment. Working in an automotive workshop you will come across many hazardous substances such as acids, diesel, oil and solvents.

Hazardous substances can be inhaled or absorbed through the skin and can cause both immediate and long-term health problems, including poisoning, irritation, chemical burns, sensitisation, cancer and birth defects. They can also cause diseases of certain organs such as the skin, lungs, liver, kidneys and nervous system.

Common Automotive Hazardous Substances

The most common hazardous substances are listed below. When working in an automotive workshop you must ensure you are wearing the correct PPE at all times.

**Solvents** are cleaners used in an automotive workshop. When a person comes in contact with a solvent the hazardous substance can enter the body via mouth, skin or vapour contact. Please ensure you are aware of the substance you are working with and use the correct protective personal equipment which should be supplied by your employer or teacher. Never use a solvent to clean your hands.

**Petrol & Gas** is a highly flammable substance. It is very common to come across these substances in an automotive workshop. The containers must be stored correctly and

**Asbestos** is used in some older brake linings and therefore are an issue when working on motor vehicles. Do not come in contact with or disturb any dust particles as this may be asbestos particles.

**Spray Paint** can have adverse effects on people in the long term if the fumes are inhaled. Issue that could arise long term are brain damage and internal organ problems.

**Batteries** should always be handled with the correct personal protective equipment such as work boats, overalls, rubber gloves and eye protection. The batteries contain harmful acids.

**Welding** can generate hazardous fumes and should be performed away from other workers. There must be sufficient ventilation for welding also.

**Dust** in the workshop can be hazardous. The particles can contain metals from sanding or cutting. The workshops should be well ventilated.
Students are not permitted at any time to enter a pit. The pits can cause a buildup of exhaust fumes within the confined area which is a health hazard.

**MSDS**

Manufacturers of chemical substances are required to supply adequate information such as Material Safety Data Sheets (MSDS). Specific MSDSs should be supplied for each chemical in use within the workplace and are available from chemical manufacturers and/or suppliers. If MSDS are not provided on purchase, they should be requested from the supplier.

An MSDS is a document containing important information about a hazardous substance and must state:

- a hazardous substances product name
- the chemical and generic name of certain ingredients
- the chemical and physical properties of the hazardous substance
- health hazard information
- precautions for safe use and handling
- the manufacturer’s or importer’s name, Australian address and telephone number.

All containers of hazardous substances used in a workplace, including those delivered to and those produced within the workplace, must be appropriately labelled. A correct label of a hazardous substance used must not be defaced, modified or altered.

**Storage and Maintenance**

Wherever possible, store chemicals in the original container with labels intact. If labels come off, always re-label the container. When chemicals are decanted into smaller containers they must be labelled appropriately. Never store chemicals in drink or food containers.

Labels are required so that the contents of a container can be easily identified. The supplier is responsible for the correct labelling of a hazardous substance.

All hazardous substances are to be labelled correctly, ie. in accordance with the National Code of Practice for the Labelling of Workplace Substances.

Hazardous substances should be stored in accordance with the information provided on the Material Safety Data Sheets.
The following list gives an overview of what information a label should contain. It is recommended that a label on hazardous substances containing more than 500ml or 500g should contain the following:

- signal word(s) and/or dangerous goods Class label and subsidiary risk label(s)
- product name, chemical name, United nations Number, other ingredients
- risk phrases
- directions for use*
- safety phrases
- first aid procedures
- emergency procedures*
- details of manufacturer or importer
- expiry date (where relevant)*
- reference to MSDS.

The requirements with an "**" are not needed on smaller containers of 500ml or 500g or less.

**Controlling Risks and Hazards**

The most effective control measures in reducing the risk associated with exposure to a hazardous substance is to remove or reduce the risk at the source. This can be achieved by measures such as elimination, substitution or isolation of a hazardous substance or by engineering controls such as the provision of adequate ventilation.

Other ways to reduce exposure to hazardous substances include:

- removing a non-essential hazardous material
- using a less hazardous materials or the same substance in a less hazardous form or process
- separating a process from people by distance or by barriers
- using machinery, equipment or processes that minimise workplace contamination by containing or removing hazardous material
- changing the way that people do the job or having procedures about how to do the job safely
- protective equipment or clothing like respirators, gloves or eye protection that is suitable for the material, and complies with relevant Australian Standards.
The assessment of hazardous substances should be carried out by a qualified person.

**Personal Protective Equipment**

If Personal Protective Equipment (PPE) is required when using a hazardous substance, the PPE should be suitable for the substance and the work involved.

The PPE required should be accessible to all employees, staff, others and volunteers.

All users should be instructed in the correct use of PPE and the reasons why they are required to use it. Instruction on cleaning, maintenance and replacement of the PPE should also be included.

**Emergencies and First Aid**

Emergency procedures should be in place in the event of a spill or leak of a hazardous substance. All employees and others should know what to do if there is an emergency. (eg. emergency evacuation, containing the spill)

First-aid equipment such as eye washes and emergency showers may be required in specific areas of the workplace, especially when using certain hazardous substances. These should be easily accessible and maintained on a regular basis.