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# Vehicle Fire Suppression Systems

*Protecting People & Property*

**WORMALD**



# The professional choice

## Specialists in fire protection since 1889

Wormald is a leading provider of fire protection solutions and has been protecting people and property for over 120 years.

Our expertise spans the design, manufacture, installation and service of fire products and equipment backed up with a comprehensive range of services from engineering advice to fire safety training.

Our range of Vehicle Fire Suppression Systems has been developed for fires occurring in the engine and transmission compartments, brakes and hydraulic areas of heavy vehicles, plant and equipment used in industries such as mining, quarrying, construction, waste disposal and forestry.

Specialising in fire detection and protection systems since 1889 and operating in over 45 locations regionally, you can rely on Wormald to help you protect your people and machinery.

## Protect your people and business from vehicle fires

When you combine heat, flammable liquids, turbo chargers, exhaust gases, electrical components and brakes in the enclosed space of an engine compartment, the potential risk of a fast and furious fire is high.

If you add a burst hydraulic hose, faulty fittings or a collision then the consequences can be devastating. The comprehensive range of Wormald Vehicle Fire Suppression Systems is your best defence against the threat of vehicle fire.

Whether a foam water spray system, dry or wet chemical agent, our proven end-to-end solutions are designed to rapidly suppress fires in all kinds of vehicles from huge mining and quarrying plant and equipment to small forklifts and 4WDs.

## A leader in Standard compliance

Wormald was one of the first fire protection companies in Australia with a vehicle fire suppression system that complied with Australian Standard, AS 5062-2006: Fire protection for mobile and transportable equipment.

AS 5062-2006 was the first of its kind and it was key industries, such as mining and forestry as well as Occupational Health & Safety bodies and the Fire Protection Association of Australia (FPA Australia), that were the driving force behind its introduction by Standards Australia.

Although AS 5062-2006 is not mandatory at the moment, we hope our compliance sets an industry-leading benchmark and that this is the first step towards ensuring all vehicles are equipped with vehicle fire suppression systems of the very highest quality.

Should a fire break out, Wormald systems can provide operators with the additional time necessary to safely evacuate. Importantly, Wormald systems also protect against business interruption by minimising damage to the vehicle or equipment through the suppression of the fire.

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# Vehicle Fire Suppression Systems

Every day, Wormald's pre-engineered Vehicle Fire Suppression Systems help protect thousands of vehicles across all types of industry including mining, quarrying, construction and forestry. Proven and flexible, they suit a huge range of mobile plant, equipment and vehicles.

Using Wormald's fire risk assessment processes which are based on Australian Standard AS 5062-2006, we will work with you to determine the appropriate Vehicle Fire Suppression System for your needs.

## Foam Water Spray Vehicle Fire Suppression System

Wormald's Foam Water Spray Vehicle Fire Suppression Systems have been developed for the suppression of fires in the engine and transmission compartments, brakes and hydraulic areas of mining, quarrying, construction, waste disposal, and forestry vehicles.

Our foam water spray system discharges a continuous stream of foam water spray for approximately 60 seconds to rapidly suppress flames and dramatically cool hot surfaces to help prevent re-flash. At the same time the foam additive, Aqueous Film Forming Foam (AFFF), smothers fuel and oil-spill fires, to help prevent re-ignition.

Wormald's foam water spray system consists of water and 6% foam concentrate (ANSUL® ICAO-B 6% AFFF). The nozzles target risk areas such as the turbo charger, manifold and starter motor in the engine compartment, the transmission compartments and the pumps and valves.

To ensure safe and efficient operations, it features high-quality stainless steel foam storage containers, stainless steel and brass

discharge valves, steel-braided hydraulic hose, protective stainless steel nozzle caps, an overpressure safety device and reusable or crimped fittings. Depending on your requirements we can offer automatic system release with manual actuation, as well as an option of manual only actuation system.

Designed and manufactured in Australia to suit harsh Australian conditions, the system can be easily recharged in situ. This is critical in remote regions where specialised support is not immediately available. The systems also feature automatic detection and actuation – pneumatic or electrical – so your equipment is protected whether or not there is an operator present.

By undergoing a series of rigorous fire tests and system component stress tests, Wormald's Foam Water Spray Vehicle Fire Suppression Systems are CSIRO ActivFire™ listed as being compliant to AS 5062-2006.



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# Dry Chemical and Dual Agent Systems

Wormald's Dry Chemical System is a pre-engineered system designed for the protection of industrial equipment in areas such as mining, waste handling, forestry and construction.

## Dry Chemical System

ANSUL A-101 mobile equipment fire suppression systems discharge ANSUL FORAY multipurpose dry chemical agent to quickly knock down flames. The fixed-nozzle system can be designed to "flood" entire areas with dry chemical agent, or can be aimed at specific high-hazard areas and is offered in a range of container sizes from 30lb, 50lb, 125lb and 250lb with optional extended discharge available for high risk applications.

Base ANSUL A-101 systems utilise automatic detection and actuation controls, backed up by remote actuators.

- > LT-A-101 expands the capabilities of the original A-101 system for use in temperature extremes, from -54° to 99°C.
- > LP-LT-A-101 low profile system provides protection in underground mining environments.

## Dual Agent System

The Dual Agent System incorporates an ANSUL A-101 dry chemical system with an ANSUL LVS (Liquid Agent) wet chemical system. Stored in tanks and discharged by pressurised nitrogen, LVS agent dramatically cools surrounding areas, helping to contain fires and prevent reflash. Because it is a liquid, LVS agent flows along the same path as burning fuels to reach and suppress fires in areas dry chemical agent cannot. The Dual Agent System has the major advantage of combining the fast knock down

that dry chemical powder provides, plus the rapid cooling effect of a wet chemical liquid.

The Dual Agent System is available with pressure operated (cartridge) actuation and include an ANSUL ASC-N CHECKFIRE indicator panel which features a key isolate switch, magnetic reset tool, history buffer, battery back-up, engine shutdown time delay and remote operation to maximise safety, convenience and effectiveness.

ANSUL A-101 dry chemical vehicle systems and ANSUL A-101/ANSUL LVS dual agent systems are CSIRO ActivFire™ listed as being compliant to AS 5062-2006.



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# LVS Liquid Agent Vehicle Fire Suppression System

The ANSUL LVS (Liquid Vehicle System) fire suppression system is a versatile stand-alone liquid agent system that can be used to protect vehicles in various industries including mining, forestry, construction and transportation.

The wet chemical agent used in the ANSUL LVS is a unique blend of organic and inorganic salts, coupled with surface active agents. If a fire occurs on a vehicle, the ANSUL LVS system detects and releases the suppressing agent onto the fire to interrupt the chemical reaction that supports combustion. Due to the agent's liquid form, it can easily flow into areas where flammable liquids settle. The agent's water content assists in cooling the fuel and any highly heated surfaces, further aiding the suppression of the fire, and minimising the chance of re-ignition. To further reduce re-flash potential, the agent also forms a film over flammable fuels.

The ANSUL LVS is suitable for the protection of off-road mining equipment as a stand-alone system. This includes various types of above ground or below surface equipment which are subject to harsh environments and constant use. The liquid agent system is also well-suited for other off-road vehicles such as landfill equipment, forestry vehicles, construction equipment and specialty vehicles such as slag pot carriers, iron/steel slab carriers and tunnel boring equipment. Other applications include on-road vehicles such as public transportation, waste management, over-the-road trucking and cargo transport.

The ANSUL LVS has been proven to be highly effective on Class A and Class B fires and is CSIRO ActivFire™ listed as being compliant with AS 5062-2006. With its rugged steel construction, corrosion resistant paint and operating temperature range of -40° to 60°C, the ANSUL LVS is ideal for harsh Australian environments. The

proven technology of the external gas cartridge provides constant nozzle pressure and a full discharge pattern throughout the duration of discharge for effective fire suppression. In addition, the LVS agent does not need to be changed annually as a result of its pre-mixed solution, saving cost and minimising operational disruption for owners – this is known as a life-of-cylinder suppression agent.

The detection and control system used with the ANSUL LVS system is the ANSUL CHECKFIRE ASC-N Electric Detection and Actuation System which combines to provide automatic fire detection and activation.

In addition, the ANSUL LVS is designed to be a stand-alone fire suppression system, but may also be used in a Dual Agent System, in conjunction with an ANSUL A-101 dry chemical system.



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# Would you know what to do if an emergency occurred?

Fire can destroy large vehicles with frightening speed. A burst hydraulic hose creates a spray of burning fuel, while combustible liquids inside engines can ignite in a split second. Would you know what to do if any of these emergencies occurred in the next 10 seconds?

The best way to minimise irrational behaviour is to have well-trained staff who can respond confidently in these situations.

Wormald's training solutions are designed to help employers, site owners and managers meet their regulatory obligations. Wormald offer courses that provide the right training and material for employees who work with industrial vehicles, to help promote a safer working environment.

Wormald's emergency response courses give your staff the skills and confidence to make the right decisions and act quickly in the event of a work place emergency.

## Available Training Courses

### Fire Extinguisher Training

Wormald offers both non accredited and Registered Training Organisation (RTO) accredited sessions of the Fire Extinguisher Training.

Both courses are a combination of theory and practical training, educating participants about the relevance of fire safety regulations and providing the opportunity to develop operational techniques when using fire equipment in the workplace.

The differentiator between the two course options is that the RTO version is ideal for any employee who may need a nationally accredited qualification.

### Breathing Apparatus (BA) Course

The Breathing Apparatus (BA) course provides participants with the skills and knowledge to use Self Contained Breathing Apparatus (SCBA) in the work place (MSAPMOHS2 16A - Operate breathing apparatus).

This nationally accredited course covers the competency associated with the operation and maintenance of BA equipment in an irrespirable atmosphere. Topics include: conduct pre-donning checks and test BA, check and operate BA, maintain, test and identify BA components, describe the physiology of respiration and respond to incidents requiring BA to be worn and use safe working practices

### Confined Space Entry Course

The Confined Space Entry program equips authorised employees with the knowledge and skills to safely enter and operate in confined spaces, avoiding exposure to hazardous substances, flammable or explosive conditions, engulfment, asphyxiation by unsafe oxygen levels or other safety or health issues (MSAPMPER200C - Enter confined space; MSAPMPER200C - Work in accordance with issued permit).

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## Protecting your people as well as your property

*Fact: A potentially fatal fire can often be stopped before it really starts if the right fire equipment is close at hand.*

### **ELSA - Escape Breathing Apparatus**

Designed for escape from hazardous atmospheres, Wormald's breathing apparatus, ELSA, can assist operators escaping from a burning vehicle and complements the Vehicle Fire Suppression Systems. Fast and simple to put on in an emergency situation and providing powerful protection from harmful gases, ELSA, has helped thousands of people escape safely from hazardous atmospheres such as in a fire.

ELSA is the third generation of the original Emergency Life Support Apparatus pioneered under the proven Sabre brand and it complies fully with the latest SOLAS marine regulations.

- > Very simple to operate – starts automatically upon opening of bag
- > Provides clean breathable air
- > Easily rechargeable and reusable
- > 10 and 15 minute versions available
- > Limited training required
- > Easy to follow illustrated user instructions



### **Fire Extinguishers**

A vital part of Wormald's business is 'first-aid' fire fighting equipment – appliances such as portable fire extinguishers, fire hose reels and fire blankets, that form the first line of defence against fire.

Portable fire equipment needs to be identifiable, easy to get hold of and appropriate for the property it is intended to protect. Wormald offers a range of portable fire extinguishers to suit all classes of fire and fire risk. Each extinguisher type is distinguished by a coloured band around the top of the cylinder, except for the water type extinguisher which is all red with no coloured band, making identification quick and simple.

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# We provide emergency service 24 hours a day

## Services

### 24/7 emergency support and end-to-end maintenance

Wormald does not just provide equipment to minimise fire damage. With 24/7 emergency support and full maintenance services, Wormald provides valuable peace of mind that your people are safe and that your business can continue in the event of fire to your vehicles.

If you have an incident, simply call our 24/7 service centre and we will take action to help ensure that your fire protection equipment gets the attention it needs, whatever the hour.

A major component to AS 5062-2006 compliance is the regular inspection, testing, preventative maintenance and survey procedures for vehicle fire suppression systems to help ensure that a system is fully functional and will perform as designed if a fire

occurs. Wormald offers such measures under our quality approach program to testing and maintenance. Our technicians can visit your site to check, test and service your fire protection systems, including agent refills.

Wormald technicians involved with the provision of emergency support and maintenance services have been trained through our Vehicle Systems training program.

Wormald also offers a valuable range of comprehensive services including risk assessment, system design, technical drawings and operator training.

At Wormald, our priority is your protection.

## Contact Us

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