



Fire Protection Solutions for Mining

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Protecting People & Property

 **WORMALD**



Protecting against a major fire is essential in mining operations

Protecting people and property

A large fire in a mine can be a serious threat. Extra vigilance in helping to prevent and adequately preparing for fires is essential, given the hazardous nature of materials and the remoteness of many mining operations. Wormald has worked with mines for many years, to provide effective and reliable fire protection towards mining staff and critical equipment assets.

Wormald offers fire protection solutions for the mining industry. We are one of the region's largest fire protection providers and have successfully implemented large-scale fire protection systems in complex and production-intensive mining operations. Our specialist teams can design and install tailored fire protection systems that are compliant to Australian standards. We also offer upgrades to your existing fire systems, to help meet your requirements.

When it comes to the complexities and dangers of the mining industry, Wormald has a depth of experience, knowledge, skills and technology. Wormald is part of Tyco International, a world leader in fire protection and electronic security products, so we have access to the very best physical and intellectual resources.

Wormald's end-to-end mining solutions

Wormald's expertise includes; designing, installing, maintaining and upgrading fire protection systems as well as providing consulting, technical support, engineering advice, training and evacuation plans.

We bring our extensive fire protection experience in complex, production focused operations, to your unique site. Our team can survey your entire facility and provide you with a complete fire protection solution, from detection and suppression systems to fire fighting equipment and training.

Our range of specialised services include:

- > Risk Assessments
- > Design, Install and Commission
- > Certification
- > Safety Audits
- > Service and Maintenance
- > Fire Protection Equipment
- > Fire and Emergency Safety Training

As part of our service we provide a full parts and installation warranty of our products and systems.

Protecting vehicles

When you combine heat, flammable liquids, turbo chargers and electrical components in the enclosed space of the engine compartment, the potential risk of a fast and furious fire is high. "Mega class" equipment typically found in mines, such as; excavators, haul trucks, wheel loaders and other specialised equipment, contain hundreds of litres of diesel and hydraulic fluid, creating a sizeable source of fuel.

When a fire breaks out in a mining vehicle – whether underground or on the surface – the results can be devastating. Expensive repair or replacement is required, months of downtime and, most importantly, the possibility of serious injury to the operator.

*FACT: Fires and explosions in mines have been identified as one of eight key causes of over 85% of fatalities on the Australian Mining Industry over the past 15 years.**

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We can help you protect your valuable resources from fire

FACT: Wormald has become one of the first companies in Australia with a vehicle fire suppression system to comply with Australian Standard AS 5062-2006: Fire protection for mobile and transportable equipment.

Wormald's specialised systems rapidly detect and suppress fires in the engine and transmission compartments, brakes and hydraulic areas, dealing with the fire before it can take hold.

Protecting plant and equipment

Wormald provides a range of effective fire protection systems for process plants, underground conveyors, static and mobile plant, draglines, workshops, substations, Monitor Control Centre (MCC) rooms and switch rooms.

Fire sprinkler systems

Sprinklers in conjunction with a detection system can automatically detect a fire, transmit an alarm and control the fire. Swift response can be the difference between a minor incident and a major business shutdown. Our cost-effective sprinkler systems are designed by carefully analysing the fire risk of your site. Our professional project managers and their teams install and commission the system and make sure it is ready to respond if needed.

Water spray deluge systems

Water spray deluge systems are typically used in hazardous environments where fires may spread very quickly or where valuable equipment surrounding the fire needs to be cooled. These systems are well suited to mine sites. At the heart of our systems are specialised spray nozzles, positioned at the correct location, to quickly bring fire under control and stop it spreading.

Water mist systems

Water Mist is a versatile and highly efficient fire-fighting medium, delivering water in fine droplets. When a droplet of water vaporises, its surface area expands 1,600 times. Heat absorption is a function of surface area and not volume, so smaller droplets mean faster heat absorption.

Foam systems

Foam systems effectively smother and contain fire. Our designers will analyse your fire risk and design a system configured to deliver foam to the fire efficiently and in a controlled and directed manner, effectively combating fire.

SAPPHIRE™ fire suppression systems

The SAPPHIRE™ fire suppression system is a gaseous flooding system designed for use in areas that house sensitive equipment that cannot be shut down. The SAPPHIRE™ agent does not conduct electricity, is non-corrosive, and minimises the risk of damage to sensitive equipment. It leaves no residue and requires no clean-up.

Inergen® gaseous systems

The Inergen® gaseous system is comprised of naturally occurring atmospheric gases, so it has no ill effects on people, the environment or equipment. Inergen® is the fire suppression system of choice for enclosed areas that contain high value or mission critical assets.

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Being prepared to respond in an emergency

Inergen® extinguishing agent does not impact on protected equipment because Inergen® is clean, dry and electrically non conductive. It does not decompose into damaging by-products when it comes into contact with flames or hot metal surfaces. It does not produce toxic or corrosive residue or deposits to clean up after an Inergen® release.

Life Safety and Rescue

Breathing apparatus, thermal imaging cameras, gas detection products and other specialised devices are an important part of a mine's fire protection regime. Wormald is one of the leading suppliers of emergency breathing apparatus and is widely recognised as a world leader of supplying emergency rescue and respiratory protection equipment. Our staff are trained to advise you on the most suitable equipment for your situation.

Fire detection and evacuation systems

Removing people from the fire area is the top priority when there is a fire. Wormald's fire detection systems detect fires in the very early stages of burning by sensing heat, smoke, combustion gases or a combination of these. Our fire experts will help you develop warning systems and evacuation plans so that people can quickly escape from danger.

Training

When mining in remote locations, all workers must maintain higher skill levels in emergency response than workers in many other industries.

Correct training reduces the likelihood of serious fire incidents and injuries, both by preventing fires and responding to them. It enhances awareness of fire hazards and promotes self-confidence in combating both underground and surface fires.

We offer a suite of training programs, from warden training to evacuation procedures, hazardous chemicals to confined space training.

Servicing

Fire protection systems require regular servicing to run at optimum performance and effectively combat fire. Our service teams will regularly test and audit your system to ensure it meets all required standards. We are on call day and night throughout the year to assist with servicing, maintenance and troubleshooting – our technicians can deal with most problems on the spot.

*FACT: Fires, particularly vehicle fires, are the second most significant cause of "high potential incidents" in Australian mines.**

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*Minerals Industry Safety and Health Centre Sustainable Minerals Institute; University of Queensland March 2005