

Deeper Digging

Underground Mining
Fire Suppression Systems



**High Risk
Requires High Performance**

Underground mining involves high rewards, but also high risk. A fire can mean loss of equipment, productivity, or life. It can also create a public relations challenge and negatively affect insurance premiums. For over 40 years, Ansul has protected the hardest working heavy equipment in the world with the most trusted fire suppression systems available. Ansul offers a complete line of fire detection equipment, suppression systems, and hand portable extinguishers for underground mining applications.

**Systems Designed for
Today's Demands**

Scooptrams, tunnel boring machines, and continuous miners work around the clock. Class B flammable liquids (fuels, oils, and hydraulic fluids) flow through pressurized lines within inches of super-heated turbochargers, manifolds, and engine blocks. It's a good thing Ansul provides 24-hour fire protection with fully self-contained dry chemical and twin-agent systems that suppress, cool, and help prevent reflash. From top to bottom, Ansul has a solution for virtually every underground application. So go ahead, dig deep.

**Inspired Innovations to
Meet Demand**

Prior to Ansul introducing vehicle fire suppression systems in the 1960's, the mining industry experienced crippling losses due to fire. The industry has evolved, as has Ansul fire suppression technology, exceeding the demand of today's underground mining equipment. Protecting machinery with the appropriate A-101™ or A-101/LVS™ Twin-Agent Fire Suppression System is a smart investment in preventing costly repairs and replacement, keeping insurance costs down, reducing downtime, and helping to prevent serious, life-threatening injuries.



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- **FM approved**
 - **Low profile, versatile systems for tight spaces, multiple configuration/design options**
 - **Dry Chemical/Twin Agent models with proven cartridge operation**
 - **Manual or automatic detection/actuation**
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Ansul A-101 Dry Chemical Fire Suppression System

Several versions of the ANSUL A-101 Mobile Equipment Fire Suppression System discharge proven ANSUL FORAY® (monoammonium phosphate) multipurpose dry chemical agent, quickly suppressing the flames. These systems can be designed to flood entire volumes with chemical agent or aimed at specific high-hazard areas.

Use the A-101-30 system in temperatures ranging from 32° to 130°F (0° to 54°C). With attached CO₂ cartridge and the capacity to carry 25 lbs. (11.3 kg) of FORAY dry chemical, this model performs under severe environmental conditions. Designed especially for underground mining environments, the LP-A-101-20 system provides unmatched protection in a low-profile model with a capacity of 17 lbs. (7.7 kg) of FORAY dry chemical.

Available with separate nitrogen supplies, models LT-A-101-30 and low-profile LT-LP-A-101-20 operate in temperature ranges from -65° to 210°F (-54° to 99°C). With a larger capacity of 45 lbs. (20.4 kg) of FORAY agent, the LT-A-101-50 is also rated for these extreme temperatures.

Ansul A-101/LVS Twin Agent Fire Suppression System

Space isn't a luxury underground, so the ANSUL LVS-5 is a welcome addition to the Ansul lineup. Stored in a 5 gallon (19L) tank, ANSUL LVS Liquid Agent is applied simultaneously with the A-101 dry chemical system, blanketing the fuel and cutting off oxygen while the water content cools the fuel and surrounding areas, helping to prevent reflash. The LVS-5 system is ideal for smaller pieces of equipment with minimal room for installation.

As a team, the A-101 system and LVS agent provide suppression and cooling power for the ultimate in underground protection. The FM-approved twin-agent combination has been proven effective in applications where superheated equipment, like turbochargers, is used.



Areas of greatest benefit:

**Shuttle Cars | Scooptrams | Haul Trucks | Loaders | Battery Charging Stations
Reef Dozers | Drills | Conveyor Belts | Scalers | Locomotives**



Suppression Needs Proper Detection

The exclusive ANSUL CHECKFIRE® Electric Detection and Actuation System is used with the A-101 dry chemical and A-101/LVS twin-agent systems. Rugged control modules resist shock and vibration, and feature internal diagnostics and internal/external power sources. Thermal detection options include linear wire or spot detectors.

The CHECKFIRE SC-N self-contained, electric detection system allows actuation of a pneumatically-actuated fire suppression system either manually or automatically. In addition to the features of the SC-N, the CHECKFIRE MP-N system holds MSHA approvals for use in underground mines (Permissible Applications in Explosive Methane/Air Applications).

Required Backup Support

In addition to the primary vehicle fire suppression system, an extra measure of protection is required. ANSUL RED LINE® Cartridge-Operated Hand Portable Extinguishers are proven, reliable units that suppress Class A, B, and C fires.

Hands-on Training

The best training will always be achieved through hands-on experience. The ANSUL Fire School combines education with real-world firefighting exposure at its Fire Technology Center in Marinette, Wisconsin, USA. In the classroom, students gain a practical understanding of fire suppression agents, ratings, equipment operation, inspection, maintenance techniques, and more. However, it's the valuable hands-on training that truly prepares students for the demands of underground mining fire suppression.

Ansul Protects Your Most Valuable Assets

It takes innovative thinking and extensive experience to develop systems that keep underground mining operations digging deeper. Ansul, the largest manufacturer of vehicle fire suppression equipment for over 40 years, continues to modify systems to meet today's demands.

Keep productivity up. Fire protection solutions for any type of mining application are developed by an in-house team of engineers, metallurgists, chemists, and PhDs backed by a 100-acre R&D facility.

Keep costs to a minimum. Use one source for all agents, equipment, and chemicals, plus most components - Ansul, in Marinette, Wisconsin. Trust your operation to nothing less than the hardest working, most tested vehicle fire suppression systems available.