Dust Collection

MINING APPLICATIONS

Mining

The mining industry is worth billions of dollars in the United States. By extracting ores, minerals, and other materials, mining is constantly working on implementing science and technology to improve industrial processes. Miners can benefit from improved air quality.

Dust is generated from mining equipment and various processes such as grinding, crushing, conveying, and even washing materials.

Filter Selection

Media selection should be considered. Some options that we have include:

- 80/20 Cellulose Polyester
- Nano
- We also offer Fire Retardant options:
  FR Cellulose Polyester
  FR Nano
  FR Spunbond

DIGGING INTO THE DETAILS

Health & Safety

The mining industry has far better safety standards in place today than in the past. However, it is still a dangerous line of work. One way to excel in safety is by improving air quality. Dust from sources such as coal and silica dust can cause many health problems. Back in the day before safety protocols, many miners became suspectible to what is known as “Black Lung Disease.” This occurs from long-term coal dust inhalation. Other health problems include:

- Pneumonia
- COPD
- Silicosis (From Silica dust)
- Fibrosis (Lung Scarring)

Industrial Processes & Dust Type

The various processes are used in mining such as grining, crushing, extracting, etc can cause large volumes of dust to be released into the air. Dust that once inhaled can cause long-term health issues depending on the type of dust such as silicia and coal dust.

- Extraction - Using equipment such as boring machines to extract minerals and materials from large volumes of rock. Dust is mainly generated from the machines doing this work.

- Drilling - This process is typically used in coal mining.

- Crushing / Conveying - Dust is generated from transfer points during conveying of materials.

OSHA & MSHA Regulations

To avoid paying hefty fines, mining facilities must follow regulations set up by the OSHA and the Mine Safety and Health Administration. In 2016 the organization implemented new regulations in regards to dust control:

- Concentration limits on respirable coat dust was changed to 1.5mg/m³for underground/ surface coal mines.

- Changed to 0.5 mg/m3 for intake air at underground mines.

These changes help protect miners from illness and diseases from long-term exposure of dust inhalation.

Maintenance

Whether located in an underground mine or above ground, the dust collector must be properly maintained. Leakage of dust can occur if filters are not sealed properly. According to the CDC, access doors can leak and filters can develop holes from abrasion of handling large volumes of dust and larger sizes of particulate.

Dust Collector Filters

We manufacture dust collector cartridge filters for many applications including mining in order to effectively capture and control dust.

Remember that collectors must be maintained to allow for a better filtration efficiency.

ENVIRONMENTAL FILTER

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