

## **North America Hazardous Location Motors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)**

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

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### **Report description:**

The North America Hazardous Location Motors Market is expected to register a CAGR of 5.1% during the forecast period.

#### Key Highlights

- The use of explosion-proof motors, which are designed for use in hazardous environments where flammable gases, dust, or fibers are present, is essential for the safety of personnel and equipment. Electric motors generate heat under standard operating conditions and can generate a spark if a motor coil fails. Excessive motor case temperatures or an inadequately contained spark can cause an explosion or ignite a fire in environments where specific hazardous materials are present.
- The grain and milling industries are among the most common facilities for dust explosions. Flour might seem harmless, but when it is distributed in the air in high concentrations, combined with an ignition source, confined space, dispersion, and oxygen, it causes an explosion. Flour mills have been an essential part of the American economy and the region's agricultural industry. The increasing production of flour in the North American region acts as a catalyst for the growth of the studied market.
- For instance, wheat flour production by US flour mills in 2020 totaled 425.338 million cwts, up by 3.061 million cwts, or 0.7%, from 422.277 million cwts in 2019, according to the National Agricultural Statistics Service (NASS) of the US Department of Agriculture.
- Further, cocoa powder is widely used in the region's confectioneries and bakeries. The grinding process of cocoa falls under strict regulations in the North American region, due to which the penetration of the explosion-proof motor is high. In reviewing the global incident data, food and wood products made up over 75% of the combustible dust fires and explosions recorded in the North American Region. According to the National Confectioners Association (NCA), in 2021, cocoa grindings featured an increase of 2.05%, from 1,15,591 tonnes in 2020 to 1,17,956 tonnes in 2021. The rising demand and production of cocoa are also aiding the market growth in the region.
- However, designing and manufacturing motors that completely engulf an internal explosion without rupturing or passing out any

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hot gases from the enclosure so that they are forced to exit through a long, narrow opening known as flame paths are the two major challenges faced by hazardous location motors market. Further, the Covid-19 pandemic has also posed several challenges to the studied market, like disruption in the supply chain and increased raw materials prices.

## North America Hazardous Location Motors Market Trends

### The Increasing demand for Oil and Gas is Expected to Drive the Market Growth

- When operated in environments containing combustible materials like oil and gas vapors or liquids, regular electric motors are prone to explosions. The consequences may range from minor production downtime to severe injuries and even death.
- The North American oil and gas industry presents some of the harshest challenges for hazardous location motors. The motors are a critical lifeline to the operation of the facilities, from offshore drilling to the frigid conditions of the Canadian oil sands. The region's massive production and export of oil and gas is aiding the growth of the studied market.
- For instance, According to Energy Information Administration (EIA), in 2020, Texas produced 1,782 million barrels of crude oil, while North Dakota produced 431.2 million barrels of crude oil.
- Further, according to BP plc, in 2020, The United States was among the leading global crude oil and oil products exporters, exporting 8.11 million barrels per day. At the same time, the exports from Canada totaled 4.42 million barrels per day. The region is also home to some of the significant companies in the oil and gas industry. For instance, according to Thomson Reuters Corporation, as of October 2021, Exxon Mobil Corporation, headquartered in Texas, United States, had a market capitalization of USD 257.95 billion, followed by Chevron Corporation, headquartered in California, United States, with USD 201.77 billion market value.
- Resultantly, the class-I hazardous location motors, which are designed in such a way that their motor case temperatures do not exceed safe temperatures for environments where combustible gases, vapors, or liquids are present, are increasingly being adopted in the region.

### Explosion Proof Motor in Coal Production is Expected to Hold a Major Market Share

- In coal mines, methane and coal dust are two of the most common explosive hazards. Methane explosions occur when a buildup of methane gas comes into contact with a heat source, and there is insufficient air to dilute the gas level below the point of explosion.
- Similarly, fine particles of coal dust in the right concentration that come into contact with a source of heat can be explosive. Hybrid explosions caused by a combination of methane and coal dust are also possible.
- The usage of electric motors, which do not comply with the hazardous location standards, can cause explosions when they generate heat beyond certain levels. In North America, hazardous classifications are established by the National Electric Code (NEC) and the Canadian Electric Code (CEC). The codes also stipulate the requirements for the design and labeling of the motors that are allowed to operate in hazardous environments.
- The increasing production of coal in the North American region is substantially driving the growth of the studied market. For instance, according to the United States Department of Labor, in 2020, Wyoming produced 218.5 million short tons of coal, followed by West Virginia with 67.2 million short tons of coal. Further, according to BP plc, in 2020, the United States and Canada produced 18.6% and 5.8% of the total global crude oil production, respectively.
- The class-II hazardous location motors, which reduce the heat produced by operating at a lower current rating, employ other failsafe methods like thermostats that disengage the motor power before it reaches critical temperatures to limit an excessive motor case temperature condition, are becoming increasingly popular in the region.

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## North America Hazardous Location Motors Industry Overview

The North America Hazardous Location Motors market is moderately competitive with significant players like Brook Crompton, Stainless Motors, Inc., Dietz Electric Co., Inc., Emerson Electric Co., WEG Industries, etc. The players in the market must focus on technological innovations and strategic collaborations to expand their market share.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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