

Explosives & Propulsion segment

Explosives & Propulsion business

We will develop businesses based on national policies, such as on defense and space, and focus on the introduction of eco-friendly equipment and product manufacturing.

Business strengths

- There are continuous needs for space and defense-related products
- Solid propellants for space rockets are the best technology in Japan
- Development of energy control technologies for a wide variety of consumer products

Executive Operating Officer
General Manager, Explosives & Propulsion Division

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The NOF Group's Explosives and Propulsion business provides explosives in three major areas: the industrial explosives field, the defense field, and the space field. We are developing businesses for much of this based on national policies. Our industrial explosives are used in public works mainly for purposes such as quarrying and tunnel excavation. Our defense business responds to Japanese demand for defense equipment, such as firearms and guided missiles for the Self-Defense Forces to face geopolitical risks. In the space business, we

have a mission as a top manufacturer in Japan to meet needs for solid propellants for space rockets required for launching satellites, which have become indispensable to people's lives. In each of these businesses, we have established efficient production systems to ensure a stable supply of products and to meet increasing demand, and we are working to further improve productivity.

In addition, we have been introducing eco-friendly facilities, such as those that reduce CO² emissions. Aiming to improve sustainability going

forward, we are promoting research on gunpowder compositions that reduce CO² emissions, substituting eco-friendly gunpowder that does not use lead, and accelerating development of solid propellants for small rockets that have less environmental impact.

The production plant of our Explosives & Propulsion business has a large area for security reasons, and a wide variety of wild plants grow within the grounds. By properly managing these living things, we will contribute to climate change and biodiversity.

Explosives & Propulsion segment

Main products and uses

- **Industrial explosives**

(for quarries, tunnels, etc.)

Emulsion explosives, ANFO explosives, electric detonators

- **Space rocket products**

Solid propellants, pyrotechnic devices for space rockets

- **Defense products**

Gun propellants / rocket propellants, pyrotechnic devices for missiles, defense equipment

- **Functional Products (Consumer products)**

Temperature Labels® (temperature indicator), UV Labels®, sterilization materials, antifreezing agents, NET LAUNCHER® (crime prevention device), vapor pressure crushing agent (GANSIZER®)



Contribute to social issues

Focusing efforts on space and defense-related businesses from a medium- to long-term perspective



The NOF Group has long supported the space business, starting with the Japan Aerospace Exploration Agency (JAXA). It can be predicted that information from satellites will become increasingly necessary for industries in Japan and abroad going forward, such as in the evolution of communications and the commercialization of automated driving. On the other hand, launching a rocket with high accuracy is not easy, and constant technological innovation is required. Space and defense-related business is an essential part of national policy. We will continue to focus our efforts on contributing to society while earning stable profits.

Preventing road surfaces from freezing and contributing to traffic safety Automatic liquid antifreezing agent spraying devices



When automobiles drive on roads with snow and ice in winter, there is a danger of traffic accidents caused by tires slipping. Our competitors' antifreezing agents are mostly chloride-based. However, the chlorine-free antifreezing agent KAMAGU® sold by Nippon Koki Co., Ltd. does not cause salt damage to structures such as metal or concrete, nor to the natural environment. In addition, the AUTOKAMAGU® automatic antifreezing agent spraying device is available in a version equipped with a solar panel that can be operated without electricity, thus contributing to energy saving.