### **Company Profile**

Our corporate color contains a wish to root in the ground (white) and develop to the sun(red) and space(dark blue).





https://www.hosokawamicron.co.jp





# Infinite Possibilities

Many products around us contain some form of powder that has been incorporated into the manufacturing process.

Powders come in a variety of sizes, shapes and chemical components. It has the potential for infinite possibility because various functions can be exhibited by the combination of powders with different features. The powder technology which can satisfy the demand quality to control these features has the potential for infinite possibility.

As industry works to develop new and innovative products, Hosokawa Micron is poised to meet and anticipate our customers' challenges to manipulate and create particles for advanced formulations by our dedication to the advancement of the application of powder technology.

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### Message

### Powder Technology contributes to the Society

Corporate vision

The Hosokawa Micron Group will always be the leading global company covering the mountain range of Powder Technologies. The Group will achieve peaks of excellence in the development and commercialization of advanced materials, process equipment and systems engineering.

#### Mission statement

The purpose of the Hosokawa Micron Group is to provide economical technical solutions to solve customer business problems for customer satisfaction and to contribute to society.

The Group is committed to preserving the environment for future generations by acting in an ethical manner and adhering to sound ecological practices. The Group provides a challenging and satisfying work environment for all employees in order to ensure a reasonable return to the shareholders.

The Hosokawa Micron Group has been providing and expanding "powder technologies" in a wide range of industries that make products we use and consume every day including food, cosmetics, pharmaceuticals, paint, fertilizers and hundreds of others as well to cutting-edge technologies used for the production of batteries and electronic components, advanced new materials and nanotechnology. The Group develops, designs, manufactures, and sells equipment and systems used for :size reduction of various materials; classification to efficiently separate powders specific micron sizes; mixing ;drying; agglomerating; collecting; feeding; discharging; transporting and measuring of powders. Our precision manufactured powder-processing equipment and sophisticated technologies are like tall mountain peaks, with the ancillary equipment, system engineering capabilities, and application expertise spreading out like supporting foothills. This "mountain range of powder technologies" analogy is our corporate vision. Our management strategies and business development plans are developed around this concept.

The Hosokawa Micron Group will continue to maintain its position as the world's leading company in the field of "powder technologies", and to provide new technologies and state of the art engineering expertise to meet industry's rapidly changing demands and to be a reliable partner to our customers.

#### **Corporate policy**

#### Technology Development

Industry's demands continue to increase for products to refine powders from millimeters to the micron and nano ranges.

innovation and serve customers product development to improve the value of the products

#### Globalization

Our globalization began in the 1950's. We have continued to integrate products and technologies by merging leading American and European providers of powder technology to accelerate the expansion of global business. Our global leadership is demonstrated by our international portfolio of world renowned products





Representative Director, Chairman & President Chief Executive Officer

K. Horolanina

#### Human Resources

The development of our human our employees through our own unique self improvement program, study and qualification system

#### Mountain range of powder technologies

Hosokawa's universe of technology can be envisioned as mountain peaks of superior products with a broad peripheral application of technology forming the foot of the mountain peaks.

## Moving along with the society

Since the innovation of "Micron Mill" as a fine mill which can grind a material down to micron size by unique structure, we have always focused on improving new powder technologies to meet social needs.

Fine grinding machin

Micron Mill

#### 1916

Foundation of the Company Eiichi Hosokawa founded the Osaka Turbine Water Mill Company

1930 It was a trigger to promote the Japanese industry of heavy calcium carbonate.

Development of fine grinding technology Invention of the "Micron Mill"

#### 1952

Development of ultra-fine grinding technology Invention of the "Super Micron Mill"

#### 1955

Development of classifying technology Invention of the "Micron Separator"

#### 1956

Establishment of an International Presence Exhibited to the oversea exhibition

#### 1957

**Dedication of Powder Sciences** Publishment of the journal called "The Micromeritics"

#### 1959

Development of drying technology Invention of the "Micron Dryer"

#### 1960

Establishment of overseas subsidiaries Establishment of Hosokawa Micron International Ltd. in the UK

1962 Technologies for air pollution control by suppressing a discharge of dust and soot were requir

Cross-licensing agreement with Pulverizing Machinery Co. in the U.S.A. Start sales of "Mikro-Pulsaire" and Pulverizer

#### 1963

Cross-licensing agreement with Nauta Mix BV in the Netherlands Introduction of internationally well-known standard "Nauta mixer"

#### 1964

Development of agglomerating technology Development of the "Micron Granulizer"

#### 1969

Development of powder characteristics tester Development of the "Powder Tester"



Micron Granulizer

"The Micromeritics"



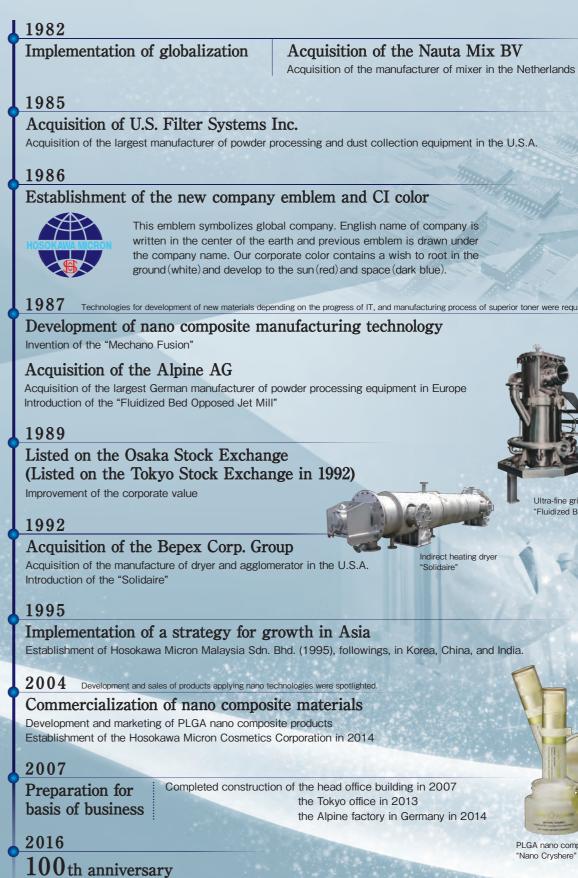
"Micron Drve

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## Innovation for opening the future of industry



Continuing innovation for the next 100 years

#### Acquisition of the Nauta Mix BV

Acquisition of the manufacturer of mixer in the Netherlands

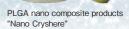




Nano composite manufacturing equipment Mechano Fusion

Ultra-fine grinding machine Fluidized Bed Opposed Jet Mill

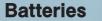
the Alpine factory in Germany in 2014



### Our technologies supporting the society

Hosokawa Micron Group applied powder technologies of size reduction, classification, mixing, particle design, drying, agglomeration, feeding/discharging, particle measurement, clean room, containment and blown film manufacturing to allow our customers to create products for sustainable future across all industries.

### Hardly noticeable but exist there



·LIB cathode materials : Cobalt based, Phosphate based, Precursors of cobalt based manganese ·LIB anode materials : Graphite, Silicon

#### **Automobiles**

·Bumpers : Talc •Tires : Carbon black, Rubber •Metallic powder coating material : Aluminum powder

#### **Toner, Magnet, Electric materials**

•Toner : Polymer, Silica ·Graphite crucibles for silicon production : Graphite ·Neodymium magnet : Materials of rare earth magnet ·Sealant of semiconductor : Epoxy resin, Silica

·Multi layer ceramic capacitors : Barium titanate

#### **Minerals**

·Building materials : Plaster, Fly ash, Cement of ultra-fine particles ·Fillers : Precipitated calcium carbonate, Ore, Clay ·Dental materials : Ceramics

#### Foods

•Rice flour •Flour •Sugar •Grains ·Fish meal •Cacao •Starch Tomato paste ·Baby foods

•Ground green tea Spices and Herbs ·Coffee beans ·l egumes ·Okara (Soy pulp) ·Dietary fibers Thickener (Carrageenan) ·Instant foods (Soup, Cocoa) Milk powders

#### **Pharmaceuticals**

·Injection : Drugs, Stabilizers, Buffering agents •Powders : Drugs, Excipients, Disintegrants ·Tablets, Orally disintegrating tablets (OD tablet) : Drugs, Excipients, Disintegrants, Lubricants, Coating materials

#### **Chemicals**

·Fire retardant : Hydroxides ·Disposable diapers : Super absorbent polymer (SAP) ·Cosmetics : Titanium oxide, Zinc oxide, Pigments •Exhaust gas treatment : Sodium bicarbonate ·General chemicals : Phosphates, Pigments, Dyes, Powder coatings, Cellulose (CMC)





•Fluorine coatings : Fluorocarbon polymer (PTFE) ·PET bottles, Chemical fibers, Plastic for industrial materials : Polyester (PET), CO-PET, Polyamide (PA), Polyimide (PI), Super engineering plastic



#### **Blown films**

 Packing films ·Barrier films for food ·Protection films for electronics

#### Agriculture

•Agriculture •Feed ·Fertilizer: Ammonium nitrate, Chemical fertilizer

·Recycling : Film edge trim, PVC window frames, Coated copper wire, Used tires

#### Ultrahard materials

·Tools : Tungsten carbide, Silicon carbide



#### **Clean rooms**

·Manufacturing environments : Pharmaceuticals, Foods, Semiconductors ·Research Facilities, R&D : Pharmaceuticals

- Nano particles
- ·Hospitals : Operating rooms

#### Air pollution control

Incinerators, Boilers, Exhaust gas treatment devices for melting furnace : High-temperature exhaust gas

### Our solutions

### **Powder processing**

Most of the products we use and consume in our daily lives incorporate powders in some form during the manufacturing process. Our global presence brings together the finest talent pool of people to develop, design and manufacture our powder processing equipment and complex engineered system based in Japan, Europe, America and some developing countries. In addition, we remain leaders in the cutting edge application of nano composite materials.

#### **Engineering and Sales of Equipment**

Our core business is designing, manufacturing, and sales of powder processing equipment and systems. Our equipment and systems (grinding, classifying, mixing, particle design, drying, agglomerating, feeding/discharging, particle measurement, bag filter, clean room, containment, etc.) are available in both laboratory sizes and full scale production capacity.

#### **Z** Toll Processing

Toll processing business requires our accumulated experience and know-how as the leading global company of the powder technology. We offer a wide range of contract manufacturing and custom services for all sorts of applications to meet the various needs of customers.

#### 🖊 Materials

Material business commercializes nano composing technology that has the feature of releasing active ingredient gradually. We also work for OEM business of the original cosmetics and hair tonic.



#### **M** After Sales Service

In order to support the safe and stable operation of customers' equipment, we conduct prevention diagnosis, rapidly provide spare parts, overhaul, remove for remodeling, support by telephone, and conduct remote diagnostic service by via the Internet and telephone.

#### Powder Technology Research Institute

Research and Development of new products and technologies within our group companies by integrating and coordinating our global R&D. We are leading the development of powder technology in the world.



### Pursuit of further diversity and high functionality

#### **Blown film**

Making packaging film for pharmaceuticals and food is a highly specialized application that incorporates technology giving the function to protect products from oxygen exposure, UV rays, and moisture. Masking tape for optics demands homogeneity of thickness and superior smoothness. We focus on the development, manufacturing, and sales of equipment and systems to produce high functional mono to multi-layer blown films.

#### Film Manufacturing System

Our main business is manufacturing, sales and system engineering of high quality blown film line. We handle consistent system from feeding equipment to winder. The core of manufacturing line is patented X-Die.

We can minimize purging times during material changeovers by innovative and compact design. This system is widely used to manufacture flexible packing film because it can easily make tubular films.



### **Global network**

Our global presence allows us to integrate the best of the human resources to lead research and development efforts throughout the world resulting in the most practical technical solutions to our customers. Our years of experience are unparalleled in the industry.

Germany

Hosokawa Micron Powders GmbH

Hosokawa Micron Ltd.

Russia

Hosokawa Micron Sankt Petersburg OOO

Poland

Hosokawa Alpine Poland Sp. z o.o.

Netherlands Hosokawa Micron BV

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Hosokawa Alpine AG Hosokawa Solids Solutions GmbH Hosokawa Kolb GmbH

Switzerland

India

Hosokawa Alpine Switzerland GmbH France

Hosokawa Micron (Shanghai) Powder Machinery Co., Ltd.

Hosokawa Micron Corp. World Headquarters

Mexico

Hosokawa Micron France Hosokawa Solids S.L. solids system-technik, S.L.

solids components MIGSA S.L.

Hosokawa Micron India Pvt. Ltd.

Malaysia Hosokawa Micron (Malaysia) Sdn. Bhd.

🌅 Korea

Hosokawa Micron (Korea) Ltd.

#### Facilities and offices (in Japan)

-72-855-2226 FAX: +81-72-855-5197 TEL: +81-72-855-2412 FAX: +81-72-855-2410

407-2, Nakatoyotuta, Kashiwa-shi, Chiba 277-0873 TEL: +81-4-7131-3180 FAX: +81-4-7131-3183

TEL: +81-29-864-3786 FAX: +81-29-864-763

<u>TEL: +81-83-263-2656 FAX</u>: +81-83-263-268

, 2F, 29-16, Imaikeminami, Chikusa-ku, Nagova-shi 1-52-735-4380 FAX: +81-52-735-7750

Hirakata-shi, Osaka 573-0171 FAX: +81-72-845-4123

#### Subsidiaries (in Japan)

+81-72-855-2212 FAX: +81-72-855-322

wa Powders Corporation ing of powder, Sales and R&D) ozaki, Tsukuba-shi, Ibaraki 300 29-864-3786 FAX: +81-29-864-7635

TEL: +81-4-7131-3175 FAX: +81-4-7131-3161

Powder Processing Blown Film 35 bases, 25 companies, 16 countries



Hosokawa Micron Ltd.





Hosokawa Alpine AG

Hosokawa Micron Corp.

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### The mountain range of powder technologies creates an infinite number of possibilities.

U.S.A.

Hosokawa Alpine American Inc. Hosokawa Micron International Inc. (Hosokawa Micron Powder Systems Div. Hosokawa Polymer Systems Div.)

Hosokawa Micron de Mexico S.A. de C.V. Hosokawa Solids Mexico S.A. de C.V.

> Chile Hosokawa Solids Chile SpA

(August 22, 2022)



Hosokawa Micron BV





Hosokawa Micron International Inc.

### **Toward the future possibility**

#### Human resources

Our group companies focus on placing the right people in the right positions and bringing up globally competent human resources who can correspond to environmental change in the way which is suitable for each country and region. Moreover, we aim to maximize group synergy effects by human resources, and realize true technology transfer through understanding different corporate cultures and business styles by personnel exchange.

#### Contributing to the fields of powder technology world wide

We support powder technology and the development of study around all fields with the belief that promotion of study leads to a good environment for not only mankind but also nature.

#### Supporting study and publishing journal

We make efforts to improve and spread powder technology to internal and external companies by organizing "the symposium of powder technology" that has been held since 1957, and publishing journals such as "The Micromeritics" and "KONA".

# For the wealthy and high quality future

producing new industries. Our challenges last forever.

Low carbon society, recycling society, universal society, etc. are known as the society to build a wealthy and high quality future.

Hosokawa Micron will meet the needs of a diversified society and customers. Moreover, we will develop the innovative technology integrated in various technologies of different fields to assist in