add us, add value.

Leading the way to materials of the future through chemistry

https://www.nissin-chem.co.jp/english/

ShinEtsu
日信化学工業株式会社

Nissin Chemical Industry Co., Ltd.

2-17-33 Kitago, Echizen, Fukui Prefecture,Japan 915-0802
TEL +81-778-22-5100 FAX +81-778-24-0657

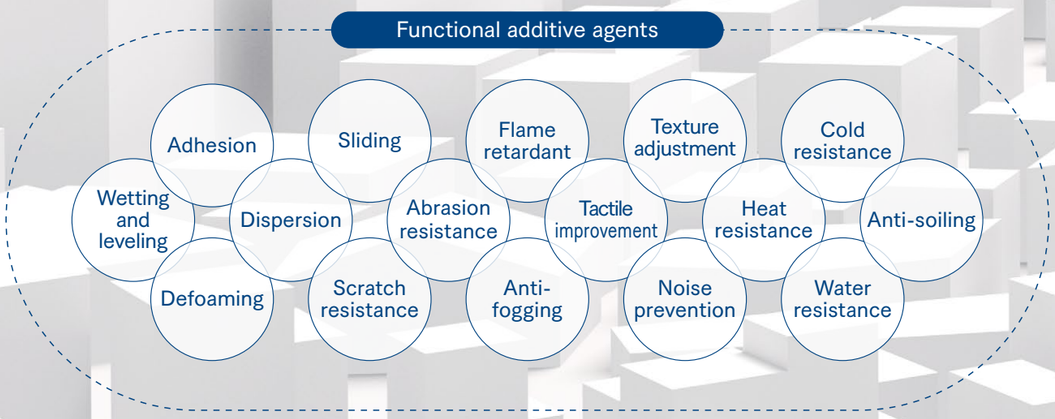
2023.9 Printed in Japan.

ShinEtsu
日信化学工業株式会社

Creating new value together with our customers.

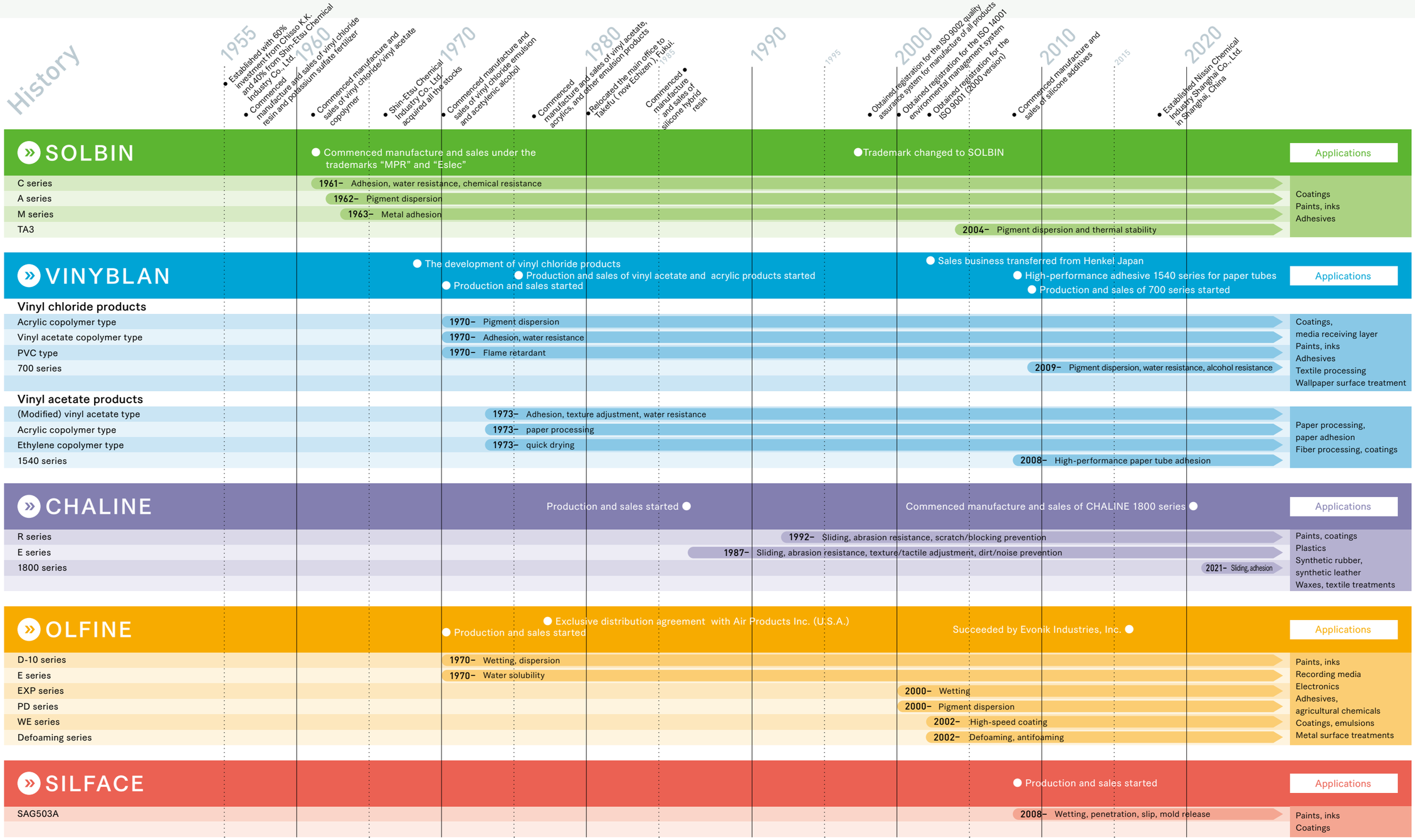
The products of Nissin Chemical Industry can improve the performance of resins and endow them with new functionalities.
With its mastery in polymerization, copolymerization, and compounding technologies, Nissin has developed and brought a range of innovative products to the market.
Prioritizing in-depth communication, we work hand-in-hand with our customers, sharing and tackling their challenges.
Through repeated prototyping, we steadily achieve the performance and functionalities that are demanded.
We highly value such partnerships.
Creating unprecedented new value together with our customers – that is the guiding principle of Nissin Chemical Industry.

add us, add value.



The continuous evolution of Nissin Chemical Industry's polymer additives

The history of Nissin Chemical Industry began with the manufacture of vinyl chloride resins through polymerization. We have since developed numerous innovative products using copolymerization techniques, creating polymer additives that have become indispensable in the manufacture of paints and adhesives. Today, we offer a diverse suite of products, from vinyl chloride/vinyl acetate and silicone-based emulsion products to hybrid resins of silicone and acrylic and acetylene-based chemicals. We have also amassed a significant track record in the development of environmentally friendly water-based additives.



Products of Nissin Chemical Industry

Nissin Chemical Industry's polymer additives are utilized in various synthetic resin products across diverse sectors, from consumer to industrial goods, helping to enhance their performance and impart new functions. In addition, they're used in the manufacturing and processing processes of items such as textiles, paper, and electronic components, contributing to a boost in productivity.

Ink & Paint

We've productized binders for water-based pigment/dye inks and additives for imparting defoaming and wetting properties to inks. SOLBIN is widely used as a binder for solvent-based inks and VINYBLAN (vinyl chloride-based) for water-based inks. OLFINE and SILFACE can be used for defoaming and foam suppression in all kinds of inks.

Paper Processing

We have a lineup of resins, wetting agents, and defoaming agents used in ink receiving layers and protective layers. The CHALINE E Series imbues paper surfaces with slideability, improving stain resistance and abrasion resistance. OLFINE is used to prevent curtain breakage during curtain coating.

Film Processing

SOLBIN is used as an agent for imparting water and anti-fouling resistance to the surfaces of resin films, and as an improvement agent for wetting and defoaming in film coating agents. SOLBIN offers various grades that excel in compatibility with other resins, pigment dispersibility, water resistance, gas barrier properties, and chemical resistance.

Textile Processing

We offer products to adjust qualities such as softness and crispness in textiles. CHALINE has a strong track record as an additive for adjusting the texture of textile products. VINYBLAN (vinyl chloride-based) imparts flame retardancy to textile products.

Resin Processing

We integrate our products with assorted synthetic resins to impart adhesion, slideability, and wetting properties. CHALINE provides functions such as slidability, abrasion resistance, noise prevention, and antifouling properties to resin molded products such as automobile parts and construction materials.

Paper Adhesion

VINYBLAN (vinyl acetate-based) is widely used as an adhesive for paper tubes, laminated paper, envelopes, etc. It has good elongation and strong adhesive power, demonstrating excellent performance in flexibility and resilience. It can be used on any type of paper.

Adhesive

OLFINE is utilized as a defoaming agent for adhesives and a wetting agent for substrates to improve their performance. Its effectiveness can be achieved with minimal addition, minimizing impact on adhesive performance.

Automobile

OLFINE serves as a wetting and defoaming agent in automobile paints, while CHALINE is extensively employed to enhance abrasion resistance of interior leather and synthetic leather that are cast using release paper or calendaring. It also prevents stickiness in injection-molded dashboard parts and functions as a noise-preventing agent for anti-vibration rubber.

Wallpaper Surface Treatment

VINYBLAN (vinyl chloride-based) is used as a surface coating for wallpaper. It can impart functions such as surface enhancement, matte finish, and water repellency.

Woodworking & Construction

We offer additives that enhance the wetting and defoaming properties of woodworking adhesives, as well as those that confer stain resistance to flooring materials and coatings. CHALINE can be used as a stain resistance agent for flooring materials and as an additive for floor wax.

Electronics

In the semiconductor manufacturing process, OLFINE and SILFACE are used to improve the dewatering and penetration abilities of various chemical solutions such as resist developers, etching solutions, and CMP slurries.

Adhesion of Dissimilar Materials

SOLBIN and VINYBLAN (vinyl chloride-based) are used in the adhesion of dissimilar materials, such as metal to paper, and leather to textiles. These products exhibit excellent properties including water resistance, heat resistance, weather resistance, chemical resistance, and gas barrier capabilities.

Vinyl Chloride-Vinyl Acetate Based Copolymer

SOLBIN

SOLBIN, a modified resin, combines the durability and chemical resistance of polyvinyl chloride with the adhesiveness and plasticity of polyvinyl acetate. Enhanced with polar groups, it dries into a tasteless, odorless film with excellent water resistance and low absorption. Its diverse applications include coatings for paints, inks, adhesives, and magnetic materials, as well as beverage cans and moisture-proof cellophane.

Features

1. Soluble in organic solvents such as ketones and esters.
2. After drying, the coating film is highly transparent, tasteless, and odorless.
3. Presents superior chemical resistance to acids, alkalis, and saline solutions.
4. Offers excellent water resistance in the formed coating film.
5. Exhibits outstanding compatibility with other resins, such as urethane and melamine resins.
6. The coating film is thermoplastic and displays heat-sealing properties.
7. The coating film is flame retardant and self-extinguishing.
8. Grades with hydrophilic groups effectively disperse inorganic pigments such as magnetic powder.
9. Grades with hydroxyl groups react and cross-link with isocyanate groups.

Applications

Coating & Paint

The coating film's exceptional chemical and water resistance makes it suitable for various coating and paint uses. Its superior ink fixation also enables use in solvent-based inkjet and thermal sublimation media receptive layers.

Printing Ink

With excellent pigment dispersion, it provides vibrant colors as an ink. Its superior re-dissolvability makes it ideal for various printing techniques, particularly in continuous or high-speed applications.

Adhesive

The coating film, with its thermoplastic properties and heat-sealing capabilities, effectively adheres to PVC substrates. The acid-added M series, exhibiting excellent metal adhesion, is used as a metal primer.

Coating & Paint

- Ink jet printing paper & film
- Heat transfer paper & film
- Woodwork, can, and marine paints
- Magnetic recording coatings

Printing Ink

- Gravure printing ink
- Screen painting ink
- Ink jet printing ink
- Pigment preparation
- Conductive ink

Adhesive

- Adhesive for aluminum
- Adhesive for metal
- Adhesive for PVC
- Heat seal adhesive

Synthetic Resin Emulsion

VINYBLAN

VINYBLAN is a synthetic resin emulsion product designed by our unique emulsion polymerization technology. We offer various grades mainly composed of vinyl chloride and vinyl acetate. Its applications span a broad range of areas, including coatings and adhesives.

Vinyl chloride products

This is a groundbreaking emulsion product developed with our unique polymerization technology ahead of the world. It is a product that takes advantage of the characteristics of vinyl chloride, and it has been highly evaluated for its wide range of applications due to its excellent pigment dispersibility, color development, and flame resistance.

Features

1. It is a water-based emulsion that ensures excellent safety.
2. It's chemically stable and shows great compatibility with a variety of emulsions, inorganic pigments, high-boiling-point solvents, etc.
3. The coating film is flame-retardant and self-extinguishing.
4. The coating film has excellent resistance to plasticizers, alcohol, and acidic/alkaline conditions.
5. Owing to its PVC resin base, it demonstrates strong polarity and enhanced color vividness during printing.

Applications

Paper processing (surface coating, inkjet receptive layers, pigment binders)
Textile treatment (glass cloth, hard finishing, flame retardant treatment),
wallpaper surface treatment, PVC leather adhesives
Paints and inks (gravure inks, inkjet inks, PVC sheet/wallpaper inks)

Vinyl acetate products

This milky white synthetic resin adhesive, created using our unique emulsion polymerization, boasts excellent stretchability, usability, adhesion, flexibility, and warp resistance. The colorless, transparent dried film doesn't stain the adhered material. It's used widely in paper processing, textiles, and woodworking.

Features

1. It offers excellent stretchability and strong adhesiveness.
2. The dried film is colorless and transparent.
3. It has superior flexibility and warp resistance.

Applications

Paper adhesion (spiral paper tubes, flat wound paper tubes, envelopes, laminated paper, bag-making, box-making, glue)
Paper processing (surface coating, inkjet receptive layer, pigment binder)
Textile treatment (for fiberglass (hand lay), fiberglass (SMC), glass cloth, hard finishing, texture adjustment, anti-fraying, carbon fiber bundling agent use)

Silicone Group Hybrid Resin

CHALINE

CHALINE is a silicone-based graft polymer resin that can copolymerize effectively with materials like acrylic and vinyl acetate through our unique polymerization process. Available in powder (R series) and emulsion forms (E series), we aim to deliver high-value, customer-focused products.

Features

CHALINE R series

1. Applicable to a wide range of synthetic resins
2. Long-lasting and superior slide properties
3. Excellent abrasion resistance
   Its superior sliding effect augments abrasion resistance. It is also effective in preventing abnormal noises such as vibration and creaking.
4. Excellent blocking resistance
   It showcases excellent resistance to blocking, and also excels at adhesion prevention.

Features

CHALINE E series

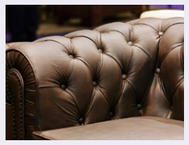
1. It is a water-based emulsion that ensures excellent safety.
2. Enriched with silyl groups, it offers excellent sliding properties and is long-lasting.
3. Its excellent sliding effect contributes to improved abrasion resistance.
4. It showcases strong blocking prevention.
5. Due to its high silicone content, it delivers effective results even with a low additive quantity.

Applications

CHALINE R series

Solvent-based Paints and Coatings

- Treatment agent for synthetic leather
- Paints for automobile interiors, adhesive adjustment, ink ribbon back coating

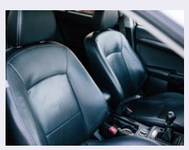


Plastic

- Automobile
- Building materials
- Electrical wire
- Hoses and miscellaneous goods

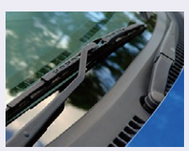
Synthetic Leather and Film

- Synthetic leather (automobile seats, notebooks, furniture)
- Tablecloths, tape substrates
- Tarpaulins, mats, flooring materials



Synthetic Rubber

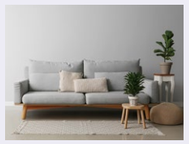
- Stabilizer bushes
- O-rings, various packings
- OA rolls, cleaning blades for OA equipment
- Wipers



CHALINE E series

Coating Agent

- Treatment agent for synthetic leather
- Treatment agent for natural leather
- Treatment agent for PVC leather

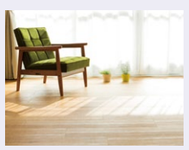


Industrial Paint

- Interior paint
- Exterior paint
- Paint for roof
- Baseboard paint
- Woodworking paint

Wax

- Automotive wax
- Wax for flooring



Fiber Treatment Agent

- Treatment agent for clothing

Acetylene-based Chemicals

OLFINE

OLFINE is an acetylene-based surfactant that greatly reduces surface tension and acts as a non-foaming wetting agent and defoamer, minimizing surface defects. It's widely used in water-based materials due to growing environmental concerns and solvent regulations. As a versatile additive, it addresses issues of wetting, foaming, and dispersion.

Features

1. Due to its low dynamic surface tension, it enables high-speed printing and coating.
2. It has anti-foaming properties, eliminating the need for defoaming agents.
3. It enables quick penetration into porous materials.
4. It imparts low surface tension and contact angle to water-based materials.
5. As a non-silicone formulation, it facilitates layered applications.
6. It can also be applied on substrates like plastic that are difficult to wet.

Applications

Paints/recording media/inks/electronics/adhesives/pesticides/ various coatings/various emulsions/metal surface treatment/ others

Silicon-based Additive

SILFACE

SILFACE is an additive with a basic structure of polyether-modified silicone. By adding it in small amounts to various paints, it can provide wetting, penetration, slip, and mold release properties.

Features

1. Regardless of the changes in the water-to-solvent ratio, it provides a consistent effect in reducing the contact angle.
2. Even if the substrate to be coated is difficult to absorb, it can stably form a film.

Applications

Inks/paints/various emulsions/electronics/detergents/ others

Strengths of Nissin Chemical Industry

Nissin Chemical Industry has been nurturing its core strengths since its founding in 1955. We strive to meet the ever-advancing needs of the industrial sector by leveraging these strengths to develop and deliver high-performance, environmentally friendly products compatible with new materials and methodologies.

» Research and Development

As a development-oriented manufacturer, we focus our efforts on both application development capabilities that finely tune to the individual needs of our customers and on fundamental research to unlock the potential of polymerization technology. In recent years, we have embraced the challenge of developing new functional resins, such as silicone composite materials, by leveraging hybridization (composite) technology.

» Sales

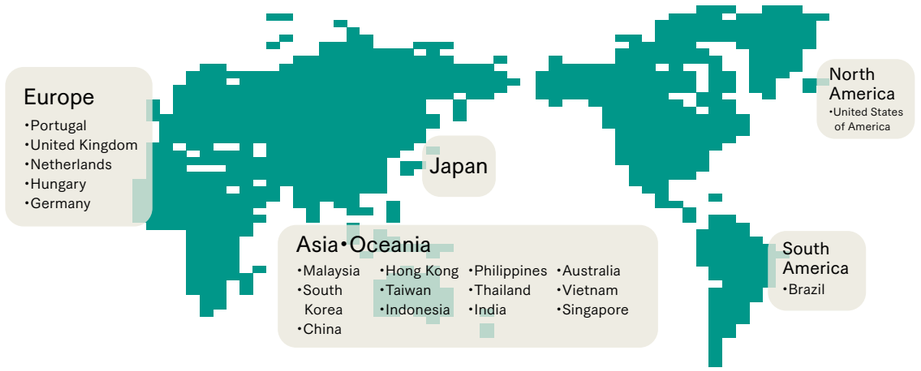
Ideas for new products arise from meeting our customers' needs and from encounters with unknown materials and methodologies.
Nissin Chemical Industry operates sales bases in Tokyo and Shanghai, China, where we offer various functional resin solutions, primarily to leading chemical manufacturers.

» Manufacturing

Our main office and factory, located in Echizen, Fukui Prefecture, are the core of Nissin Chemical Industry and are equipped with state-of-the-art equipment and systems. Upholding a stringent quality control system, we specialize in manufacturing a wide variety of products in small quantities, and we're adept at varying product specifications and volume to meet diverse needs.

» Group Power

The Shin-Etsu Chemical Group operates a total of 145 companies domestically and internationally (as of March 31, 2022). Nissin Chemical Industry, as a member of the chemical division, has been responsible for the development, production, and sales of functional resin products. Through technical and experiential exchanges with our group companies, as well as collaborations in material procurement and sales, we are expanding our business operations globally.



Towards the Realization of Sustainable Development Goals (SDGs)

Our company always stands face to face with the challenges of society and has been actively engaged in solving them directly and indirectly through product development.
We commit to continuing our contributions towards the achievement of the SDGs across all our business activities.

SUSTAINABLE DEVELOPMENT GOALS

Products of Nissin Chemical that contribute to the achievement of SDGs	Contributions	
CHALINE Silicone Group Hybrid Resin	Used in industrial hoses and abrasion-resistant wires. By blending with the main resin of hoses and wires, it can impart durability. When added to paints, etc., it provides water resistance and soil resistance, reducing the frequency of repainting.	9
VINYBLAN Vinyl chloride emulsion Wallpaper surface treatment agent	Capitalizing on its excellent pigment dispersion properties, it is used in water-based inks for digital printing via inkjet. Compared to conventional analog printing, it supports lower VOC emissions, allows the production of multiple types in small quantities with quick turnaround, and helps in reducing environmental impact.	9
	The agent provides wallpaper surfaces with water-repellent properties, reducing the likelihood of dirt accumulation. Furthermore, it adds a slippery characteristic that helps to prevent scratches, thus decreasing the frequency of wallpaper replacement.	11
VINYBLAN Vinyl acetate emulsion	This binder for glass wool insulation materials eliminates organic solvents and VOC emissions. Its application in insulation materials creates a comfortable living space, free from concerns of Sick Building Syndrome, while also improving energy efficiency in houses.	3 7 13
SOLBIN Vinyl Chloride-Vinyl Acetate Based Copolymer	It has excellent pigment dispersion and chemical resistance properties, and offers high solubility in low-environmental-impact solvents. It's frequently chosen as a raw material for eco-friendly gravure inks.	9
OLFINE Acetylene-based chemicals SILFACE Silicone additive	With superior surface tension reduction and anti-foaming properties, it's used in water-based inkjet inks for digital printing. Compared to analog printing, it lowers VOC emissions, enables small-scale production with quick turnaround, and reduces environmental impact. It's also used in digital dyeing inkjet inks for textiles, minimizing dye material loss and wastewater treatment volumes compared to traditional dyeing processes.	3 6 9

The United Nations' Sustainable Development Goals (SDGs)

- Goal 3: Good health and well-being
  Ensure healthy lives and promote well-being for all at all ages.
- Goal 6: Clean water and sanitation
  Ensure availability and sustainable management of water and sanitation for all.
- Goal 7 Affordable and clean energy
  Ensure access to affordable, reliable, sustainable and modern energy for all.
- Goal 9: Industry, innovation and infrastructure
  Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.
- Goal 11: Sustainable cities and communities
  Make cities and human settlements inclusive, safe, resilient, and sustainable.
- Goal 13: Climate action
  Take urgent action to combat climate change and its impacts.

Company Profile

Company Name	Nissin Chemical Industry Co., Ltd.
Establishment	March 1, 1955
Main Office & Factory	2-17-33 Kitago, Echizen, Fukui Prefecture,Japan TEL.+81-778-22-5100 FAX.+81-778-24-0657
Sales Headquarters	Shin Otemachi Building,2-2-1 Otemachi, Chiyoda-ku, Tokyo, Japan TEL.+81-3-6262-0276 FAX.+81-3-6262-0277
Affiliated Company	Nissin Chemical Industry Shanghai Co., Ltd. Grand Cru Room 50, 5F GIFC II,1438 Hongqiao Road, Changning District, Shanghai, China 201103 TEL: +86-21-6197-6251 FAX: +86-21-6197-6210
Capital	500 million yen
Business	Manufacture and sales of vinyl chloride modified resins Manufacture and sales of various synthetic resin emulsions Manufacture and sales of silicone modified resins Manufacture and sales of acetylenic chemicals Manufacture and sales of silicone family additive agents
Accounting period	February
Acquired ISO	ISO14001, ISO9001

History of Company

1955	Established with a paid-in capital of 50 million yen by the investment of 60% by Chisso K.K. and 40% by Shin-Etsu Chemical Industry Co., Ltd.
1956	Commenced manufacture and sales of vinyl chloride resin and potassium sulfate fertilizer.
1960	Increased capital to 200 million yen.
1961	Commenced manufacture and sales of vinyl chloride/vinyl acetate copolymer.
1965	Shin-Etsu Chemical Industry Co., Ltd. acquired all the stocks.
1970	Commenced manufacture and sales of vinyl chloride emulsion and acetylenic alcohol. Stopped manufacture and sales of potassium sulfate fertilizer because of change in raw materials of vinyl chloride.
1972	Entrusted manufacture of vinyl chloride resin to Shin-Etsu Chemical Industry Co., Ltd.
1974	Increased capital to 500 million yen. Commenced manufacture and sales of hot-melt adhesives.
1975	Commenced manufacture and sales of vinyl acetate, acrylics, and other emulsion products.
1976	Became the exclusive distributor for Air Products and Chemicals Inc.'s acetylenic chemicals in Japan and Southeast Asia.
1978	Transferred the business of vinyl chloride to Shin-Etsu Chemical Industry Co., Ltd.
1980	Relocated the main office to Takefu (now Echizen), Fukui.
1987	Commenced manufacture and sales of silicone hybrid resin "CHALINE."
1996	Obtained registration for the ISO 9002 quality assurance system for manufacture of vinyl chloride/vinyl acetate copolymer (product name:SOLBIN).
1998	Obtained registration for the ISO 9002 quality assurance system for manufacture of all products.
2000	Obtained registration for the ISO 14001 environmental management system.
2001	Obtained registration for the ISO 9001 (2000 version).
2002	Terminated the Exclusive Distribution Agreement for the import and sales of acetylene alcohol chemicals with Air Products Corporation (USA) and established a new DISTRIBUTOR-AGREEMENT with Air Products Japan Corporation.
2003	Commenced manufacture and sales of Environmentally-friendly hot-melt adhesives.
2008	Commenced manufacture and sales of silicone family additive agents “SILFACE”.
2009	Commenced manufacture and sales of the high performance adhesives for paper tubes. Commenced manufacture and sales of new vinyl chloride emulsion “VINYBLAN 700 series”.
2016	Evonik Industries AG inherited the DISTRIBUTOR-AGREEMENT with Nissin after its acquisition of the specialty additive business of Air Products Japan Corporation. Acquired all shares of Maruki Chemical Industry Co., Ltd. And made it a subsidiary.
2018	Established Nissin Chemical Industry Shanghai Co., Ltd. in Shanghai, China.
2021	Commenced manufacture and sales of CHALINE 1800 series.