

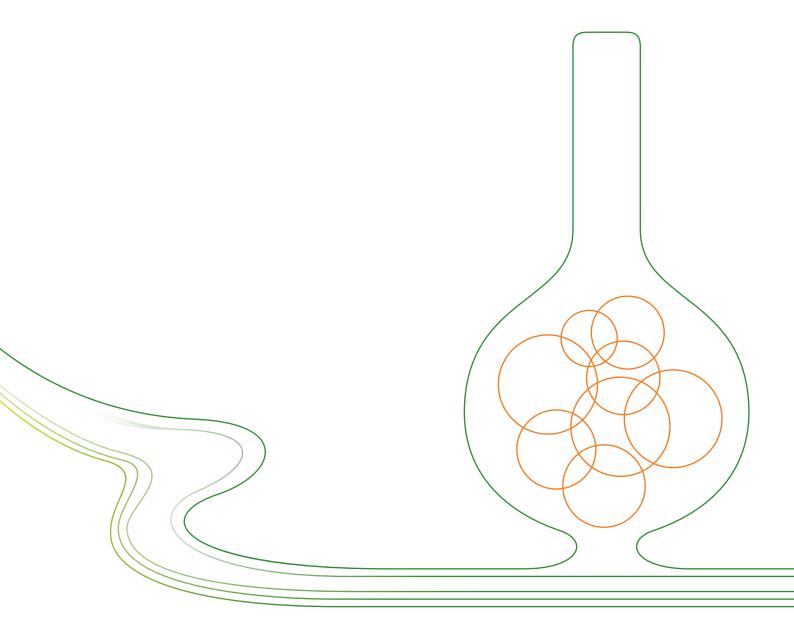
The potential of natural materials and science

Company Profile

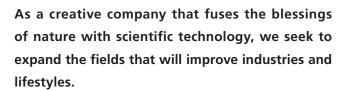
For nature and mankind to coexist.

Supporting the enhancement of sustainable lifestyles through science—

We are a leading company that upholds an environment-responsive-type business model.



Yasuhara Chemical has pursued the potential of terpene technology, which uses the blessings of nature—turpentine oil and orange oil—as raw materials to develop safe, high-quality products. Terpene is produced through the biosynthesis process that takes place within a plant, and is found abundantly in nature. In order to ensure a plentiful and stable supply of this industrial material, large volumes of turpentine oil from pine trees and orange oil from orange peels are collected. Today, with the entire world involved in preventing further global warming, the industrial world has great expectations for terpene, a renewable material that is derived from plants and results in less carbon dioxide emission than petroleum-based products. Unlike petroleum, which will possibly become depleted in the future, terpene is a vitally important raw material derived from plants, which are repeatedly renewed through the blessings of the Sun. Yasuhara Chemical was the first company in Japan to establish an industrial production system for terpene resins through its unique technology. As the top chemical products manufacturer of terpene resins, we develop and supply products used in various fields, such as adhesive tapes, adhesives, fragrances, and polymer modifiers. The originality of our products has gained a high evaluation both domestically and overseas.



The production activities of Yasuhara Chemical are founded on this basic principle of a renewable and sustainable social cycle (a permanently renewable social cycle), in which we continuously strive for a sustainable future.













### Our track record of trust

More than sixty years of pine oil production. Looking back, we see a continuing path made up of countless connections and trust.







Founding Members (Founder Hiromu Yasuhara / second from left)

Early day of Takagi Plant

1947	Yasuhara Oil Refining Plant established (Konu-cho, Konu-gun, Hiroshima Prefecture, now known as Miyoshi City)			
	Production of terpene, rosin, pine tar started			
1949	Mesaki Plant newly operated (a turpentine oil refining plant)			
1959				
	City, Hiroshima Prefecture)			
1960	Sendai Plant newly operated (a paper sizing agent plant)			
1961	Takagi Plant newly operated (turpentine oil refining plant)			
1962	Tokyo branch Office opened			
1966	Hot melt adhesive (HIRODINE) production starts at Mesaki Plant			
	(Affiliated company Hirodine Kogyo)			
	Hirodine Kogyo Co., Ltd. established			
	Hot melt adhesive business transferred from Yasuhara Yushi Kogyo			
1967	Head office relocation renewal of head office building in Takagi-cho, Fuchu			
	City, Hiroshima Prefecture			
1969	Osaka Sales Office opened			
1972	Research and development facility established in Takagi Plant			
1977	Takagi Plant in YS Plant (terpene resin manufacturing equipment) constructed (Affiliated company YS)			
	YS Co., Ltd. established (trade division of Yasuhara Yushi Kogyo and Hirodine Kogyo)			
1980	(Affiliated company YS)			

Founder Hiromu Yasuhara discovers pine oil production



1997 Merger with Hirodine Kogyo Co., Ltd. 1999 Ukai Plant constructed (hot melt adhesive and laminated film plant at Ukai-cho, Fuchu City, Hiroshima Prefecture) Listed on 2nd Section of Tokyo Stock Exchange

Listed on Hiroshima Stock Exchange (merged into Tokyo Stock Exchange in 2000)

Soryo Plant newly operated(Hot melt adhesive manufacturing plant)

Sendai Plant relocated to Minato-cyo, Sendai City, Kagoshima Prefecture

Listed on 2nd Section of Osaka Securities Exchange (Delisted in 2003)

Niihama Plant newly operated (turpentine resin refining plant)

Company name changed to YASUHARA CHEMICAL Co., Ltd.

2000

Company name changed to Hirodine Co., Ltd.

(Affiliated company Hirodine Kogyo)

- 2005 Merger with Hirodine Co., Ltd.
- 2007 Fukuyama Plant constructed (a special monomer manufacturing plant at Minooki-cho, Fukuyama City, Hiroshima Prefecture
- 2008 Mesaki Plant closed

1981

1984

1988

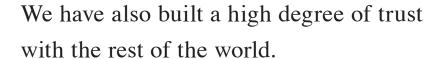
1989

1995

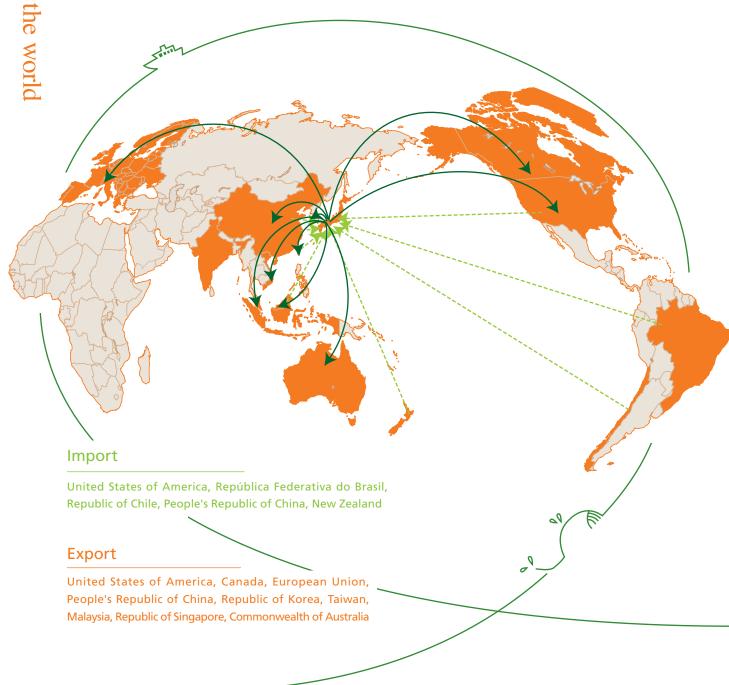
1996

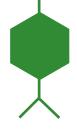
- 2010 Construction of research and development facility completed at Fukuyama Plant
- 2014 Technical and welfare buildings completed at the Fukuyama Plant
- 2016 Tokyo Office relocated to Chuo-ku, Tokyo
- 2017 Takagi Plant was integrated into the Fukuyama Plant, and the Takagi Plant was renamed to the Takagi Works of the Fukuyama Plant
- 2018 Sendai Plant Closed.
- Osaka Branch office relocated to Miyahara, Yodogawa-ku, Osaka City
- 2020 Fukuyama Plant Takagi Work Site closed
- Moved to Standard Market of the Tokyo Stock Exchange
- Integration of Osaka Branch Office into Tokyo Branch office. 2023 Integration of Soryo Plant into Ukai Plant





We import raw materials such as turpentine oil and oranges from China and South America. We process them into highly value-added products and distribute them both domestically and throughout the world. Products created through high technical skills are highly regarded overseas as well.





## Expanding our production facilities Business network



Research and development/building

### To address the issues and needs of our customers.

### That is the foundation of research and development.

The foundation of our research and development is the perspective of our customers.

Our research and development starts with our understanding the products of our business partners and sharing their values.

The focus of research and development at Yasuhara Chemical is our creative technology, which enhances added value by drawing out the properties of raw materials. Terpene, derived from a natural material, is environmentally-friendly and functions fundamentally as a renewable material. By optimizing this fundamental function and applying our creative technology to address our customers' issues and social needs, we have succeeded in creating completely new products. We try to be better partners by supplying truly highly value-added products. Our research and development strive for this, the result of which is the high credibility we have developed.

In 2010, with the objective of further enhancing the "Safety," "Communication," and "Creativity" of our research and development, a new research and development building was put into operation as part of our commitment to focusing on cutting-edge issues and technology development.



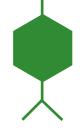
Tokyo Branch Office

Hydrogenated reaction

Quality control

Hydrogenated terpene phenolic resins synthesis

Terpene resins



Product information

The fusion of natural raw materials and scientific technology generates a wide variety of products.

Pine

Orange —

Terpene

Using our core technology, the terpene types are separated and used as industrial raw materials.



Our key product, terpene resin, is known as a tackifying resin. When terpene resin is combined with various polymer materials such as natural rubber or styrene elastomer, adhesive properties are drawn out as a result of the plasticizing action. It is indispensable in the manufacture of adhesives and tackifiers.

In addition to terpene resin, which is produced using only the renewable material terpene monomer, our line-up ranges from low softening point to high softening point products such as aromatic modified terpene resin and terpene phenolic resin, which display excellent compatibility with high polarity polymer materials such as acryl by copolymerization with petroleum-based components.

Furthermore, hydrogenated terpene phenolic resins, with their excellent color hues, thermal stability, and weather resistance are highly regarded in many industries as 'natural' tackifiers for their adhesive components and as modifying agents for various polymers.

#### [Applications]

### Chemical products

Turpentine oil extracted from plants is used as a starting material for a variety of synthetic fragrances.

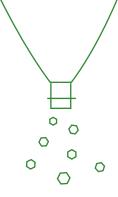
Our gum turpentine and  $\alpha$ -pinene essential oils are derived from pine trees. Derivatives of these products, such as terpineol, myrcene, and allocimene, are also produced and supplied as raw materials for fragrances used in toiletries including detergents and soaps, toothpaste, and bath agents. These naturally derived solvents have characteristic properties not found in petroleum-based solvents, and thus are attractive in many different applications and markets, including the IT industry.

D-limonene, a main component of the essential oil derived from citrus fruits (orange oil), is used not only in fragrances, air fresheners, and masking agents, but also as a cleaning component in detergents.

Q Q Q Q

[Applications]

- ○Fragrances ○Solvents ○Electronics
- Ovehicle for pastes



### Hot melt adhesive

Our hot melt adhesives improve productivity in various industries such as food, packaging, automobiles, and construction materials by enabling adhesion or sealing of substrates without the use of solvents. They also contribute toward resolving environmental issues such as conservation of energy and increase consumer convenience.

Production of a wide range of hot melt adhesives with viscosities ranging from low to super high from polyolefin bases to special elastomers is available to meet the various needs of our customers. We also provide novel solutions for adhesives.

#### [Applications]

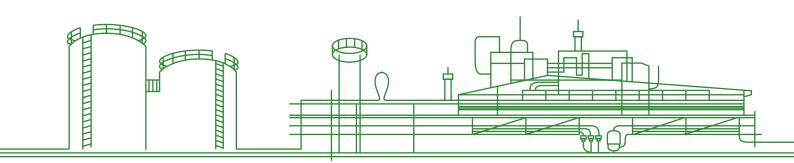
- Packaging
- ○Food package, Easy peelable lid
- OSealing, Rubber based PSA
- OAssembly for automotive
- OLife supply, Permanent PSA
- OAir filter
- Ocushioning Material, Plastic corrugate board
- $\bigcirc$  Hand gun application

### Lamination film

HIROTAC film provides a gloss finish. It is produced by laminating biaxially-oriented polypropylene (OPP) film with our unique adhesive resin. It is a pre-coated film that is designed to enable easy thermal lamination for the beautification and protection of surfaces such as printed paper, synthetic paper, and plastic film. Its three major characteristics include the following:

- Easy lamination by heating and pressing HIROTAC to an adherend.
- 2. Vivid, glossy finish with excellent adhesion.
- 3. No use of organic solvents for a comfortable and safe work environment.

#### [Applications]



# Terpene resin

Product type	Product name		
Terpene Resin	YS Resin PX, PXN		
Aromatic Modified Terpene Resin	YS Resin TO		
Terpene Phenolic Resin	YS Polyster U, T, S, G, N, K and TH		
Styrene Resin	YS Resin SX		
Hydrogenated Terpene Phenolic Resin	YS Polyster UH		
Hydrogenated Styrene Resin	YS Resin SG,SM		







Pressure sensitive tape



PSA for labels



Plastic modification



Hot melt adhesive

# **Chemical products**

Product type Product name Solvents, Raw materials for fragrances Gum Turpentine N  $\alpha$ -Pinene β-Pinene Myrcene D-Limonene Dihydro Terpineol Terpineol P-Menthane

Low molecular weight polyethylene wax Neowax

Vehicles for pastes



D-Limonene



Citrus fragrance raw materials Solvents





Traffic paint





Multilayer chip capacitors

### Hot melt adhesive

Product type	Product name		
Hot melt adhesives for packaging	Hirodine 2000 series		
Rubber-based Hot melt PSAs/adhesives	Hirodine 1000 series Hirodine 5000 series		
Hot melt adhesives for air filters	Hirodine 2000 series Hirodine 8000 series		
Hot melt adhesives for cushioning	Hirodine 1000 series Hirodine 8000 series		
Hot melt adhesives for coating	Hirodine 7000 series		
Stick-type Hot melt adhesives	Hirodine ST series		

Development of applications











Packaging

Sealing material

Extrusion lamination

# Lamination film

Product name

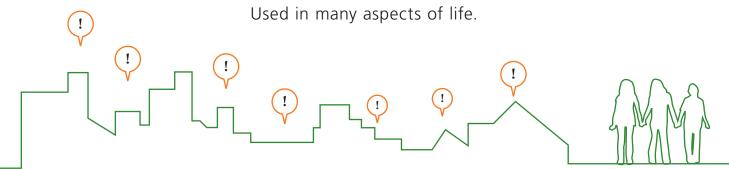
Hirotac series







Yasuhara Chemical is seen even in a place like this.





# We are engaged in various activities to achieve a sustainable lifestyle and society.

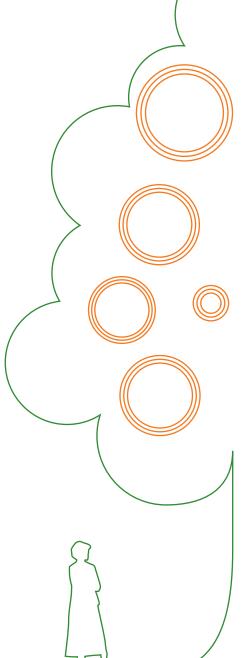
At Yasuhara Chemical, we wish to contribute to building a sustainable and abundant environment by taking the environment into account in all aspects of our corporate activities, from the purchase of raw materials to manufacturing, distribution, and sales.

To that end, in 2006 we drew up a Fundamental Policy on Environment and Safety, and in December of each year, we hold an environment security meeting. The meeting consists of reporting the results of activities and discussing the key objectives regarding environmental and safety issues for the next fiscal year. Key objectives are expressed through numerical targets as much as possible to enable an objective assessment of achievement rate. In addition to this target, all our plants also set 3-year medium-term targets for continuously engaging in activities that improve the environment.

### (Fundamental Policy on Environment and Safety)

- Contribute to society by providing products that promote environmental protection (conservation of resources, recycling, elimination of substances harmful to health) in all industrial fields by developing safe products that reduce the burden on the environment through the effective utilization of natural substances.
- 2. Every effort shall be made to protect the environment by reducing the environmental burden across the entire life cycle from product development to disposal.
- 3. Ensure the safety of our employees and the local community by continuing to operate accident-free and hazard-free.
- 4. Ensure the safety of materials and products to protect the health of our employees, distributors and customers from hazardous substances.





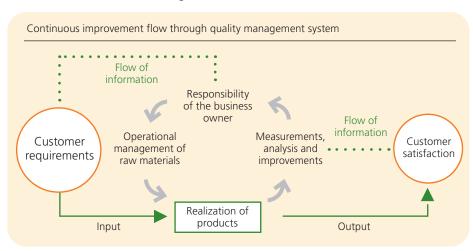






# Yasuhara Chemical's Quality management system ISO 9001

Our company acquired ISO 9001, the first principle of which is the continuous provision of high-quality products and services. We are proactively engaged in quality management based on ISO9001 to achieve a higher level of trust and customer satisfaction.

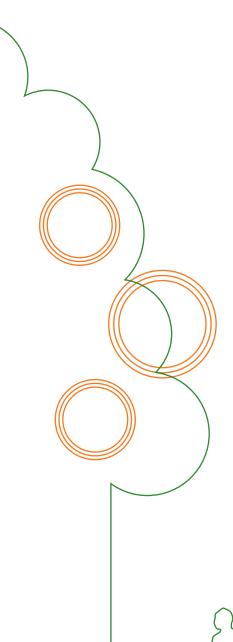


### Environment management system ISO 14001

We believe that reducing the environmental burden is critical for sustainable development. To that end, we have applied the environment management system throughout the company to conserve energy, prevent global warming, and curtail industrial wastes. Specifically, every year, various issues such as energy conservation measures, CO<sub>2</sub> emission reduction, emission and transfer volume of substances subject to PRTR, and consigned volume of industrial waste disposal are presented in numerical data in a report on the environment.

### Acquired ISO certification

-	Ukai Plant	•••	ISO9001	ISO14001
	Fukuyama Plant		ISO9001	ISO14001
	Niihama Plant		ISO9001	ISO14001



Company name YASUHARA CHEMICAL Co., Ltd.

Foundation April, 1947

Establishment February 24, 1959

Representative Representative Director President Teiji Yasuhara

Paid-in capital 1,789,560,000 yen

Securities code 4957 (Standard Market of the Tokyo Stock Exchange)

Fiscal Year March 31

Number of employees 230 (as of March 2024)

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#### Business Office, Office

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Chuo-ku, Tokyo 104-0031 Japan

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TEL:+81-3-5159-3411 FAX:+81-3-5159-3422

Procurement Department

TEL:+81-3-5159-3870 FAX:+81-3-5159-3880

#### **Plants**

[Ukai Plant]

800-111, Ukai-cho, Fuchu-city, Hiroshima 726-0002 Japan

[Fukuyama Plant]

117, Minooki-cho, Fukuyama-city, Hiroshima 721-0956 Japan

[Niihama Plant]

1-7-7, Kuroshima, Niihama-city, Ehime 792-0892 Japan

# Delivering renewable material in a value-added form.

Since its establishment, our company has supplied terpene as a safe and high-quality product derived not from fossil fuel but from nature.

Fossil fuel will not only be depleted eventually, but it poses severe problems that lead to destruction of the environment. This is no longer an era of mass production of low-priced goods. Mankind is starting to reassess the state of societies based on fossil fuel. In the midst of this, attention is turning to terpene as a renewable material. What the next generation seeks are sustainable industrial activities that rely on renewable materials. This is what Yasuhara Chemical has been pursuing for many years.

We have also placed great value on the concept of "going hand in hand together." We take pride in having built trust with our customers by providing what the customer truly seeks and superior products through our research-and-development



efforts based on an understanding of our customers' products and sharing their values. These highly value-added products that were generated from such interactions with our customers have gained global acceptance.

This is the long-awaited shift in the social paradigm that we would like to have in order to propel us forward together with a shared vision of how to realize a sustainable and bountiful future.

Representative Director President

Teiji Yasuhara

