

TOA KASEI CO.,LTD.
Since 1913



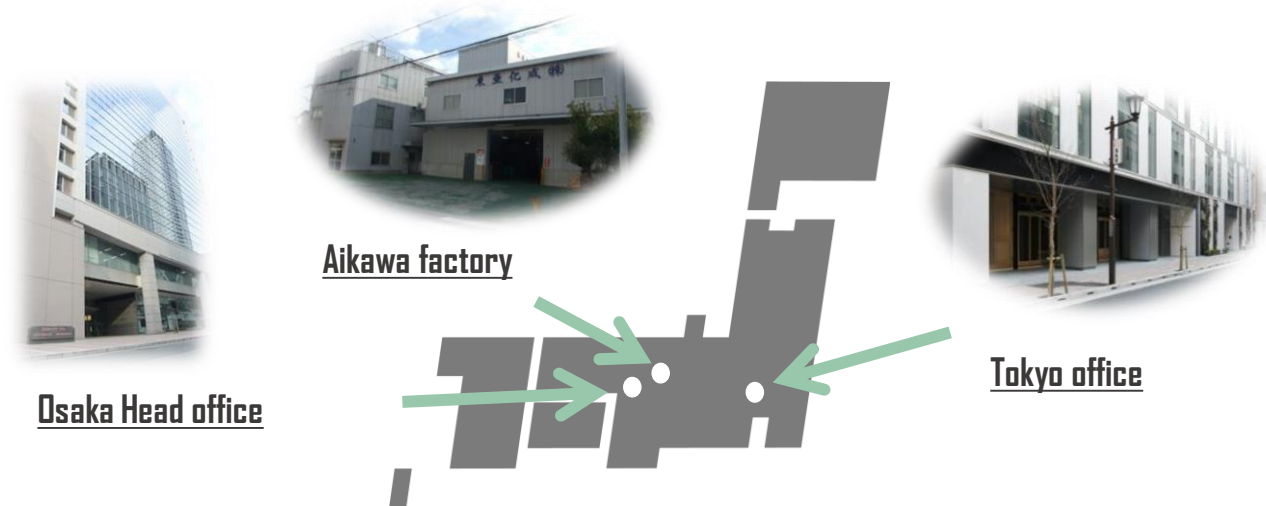
Product Catalogue

Company profile

Who we are

Toa Kasei is an innovative natural wax manufacturer in Japan. Since its foundation in 1913, Toa Kasei is focus on providing high quality of natural waxes to contribute to the development of new technologies on industrial, food and personal care field.

We will respond your demands with the 100 years of experience so that could create variety value of in various fields.



History

- | | |
|------|--|
| 1913 | Opened joint-stock company "Matsunami sho-ten" |
| 1952 | Established "TOA KASEI Co.,Ltd." (capital;2 million JPY) |
| 1993 | Opened Tokyo branch |
| 2002 | Established Aikawa factory |
| 2007 | Passed ISO Certification 14001 |
| 2012 | Passed ISO Certification 9001 |
| 2013 | Our Centennial anniversary |

TOWAX (Toa Kasei's Natural Wax)

Toa Kasei provide high quality of Natural waxes produced by selective raw materials



Main products

Carnauba Wax

Bees Wax

Candellia Wax

Sunflower Wax

Rice Wax

Rose Wax

About Aikawa factory



Location : Aikawa area, Osaka

Establishment : Oct. 2000

Certification : ISO14001 , ISO9001

Production capacity : 1,200 tons/year

Main product : Natural waxes (Flake, Powder, Block types)

< Main equipment list for Quality Control >

- Differential Scanning Calorimetry (DSC)
- Thermogravimetry/Differential Thermal Analysis (TG/DTA)
- Gas Chromatography (GC)
- UV visible spectrophotometer
- Laser Scattering Particle Size Distribution Analyzer
- Hardness Analyzer
- Penetrometer

... and many types of equipments are using for the quality control.



About natural wax

What is natural wax

Natural waxes are produced by animals, plants and occur in petroleum.

Manufacturing flow of Natural wax



But, Natural is unstable

Then, how to control



What is different?

Between normal natural wax and **TOWAX**

Most of Natural Wax are contained below three components



Toa Kasei



Wax include
4 components

- Ester Wax
- Free Lipid Acid
- Free Alcohol
- HydroCarbon

- Candelilla include 15~18%
- Carnauba include 3~4%

Some of waxes do not contain Resin



due to the various factors
 the quality of natural wax ?
 Please find **TOWAX !**

control the quality by using the technologies and know-know as below

< Main technologies >

- Blending: Reduce the lot difference against the various factors
- Purification : Enhance performance
- Separation : Produce most suitable waxes for each application

Wax		
Wax	Resin	Others
Wax	Resin	Others

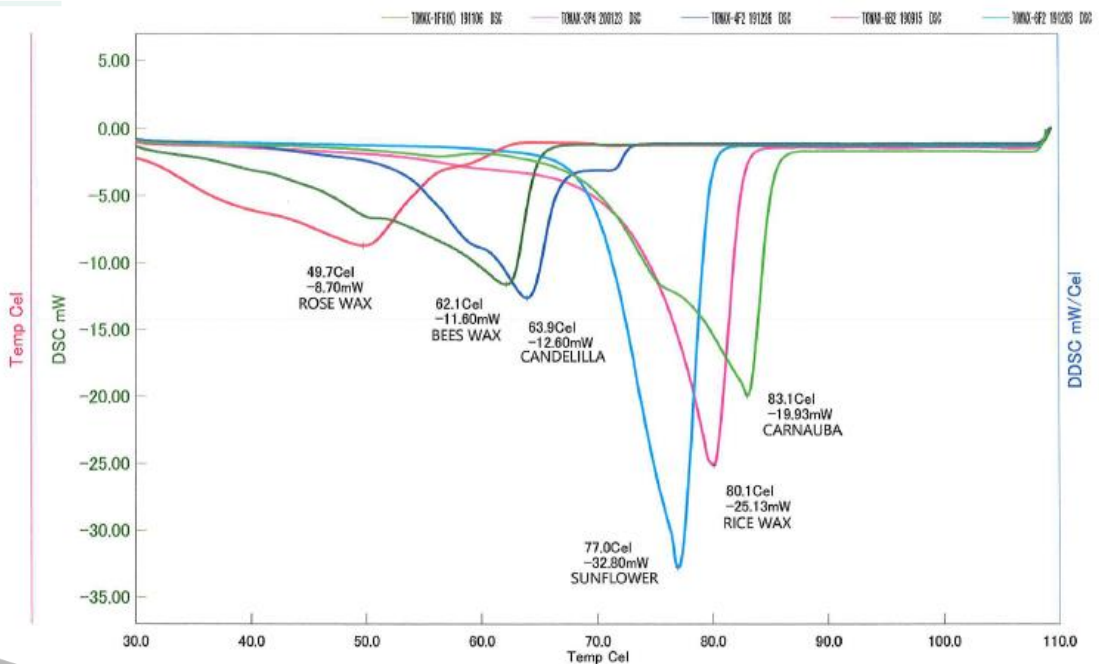
➤➤➤ **TOWAX** will provide best performance by using the separation technology in the various application !

About the property of each natural waxes

Component of natural waxes

	<u>Carnauba wax</u>	<u>Candelilla wax</u>	<u>Rice wax</u>	<u>Bees wax</u>	<u>Sunflower wax</u>	<u>Rose wax</u>
Ester	80~85% C ₄₈ ~C ₆₄ ALCOHOL C ₂₀ ~C ₃₄ [Mainly C ₃₀ •C ₃₂ •C ₃₄ C ₃₂ is about 50%~60%] FATTY ACID C ₁₆ ~C ₃₄ [Mainly C ₂₀ •C ₂₂ •C ₂₄ •C ₂₆ •C ₂₈] Good emulsifying property due to 30~35% of Hydroxy ester	24~30% C ₄₂ ~C ₅₆ ALCOHOL C ₃₀ •C ₃₂ •C ₃₄ FATTY ACID C ₁₆ ~C ₃₄ [Mainly C ₂₀ •C ₃₂ •C ₃₃ •C ₃₄]	93~97% ALCOHOL C ₂₂ ~C ₃₆ [Mainly C ₂₆ •C ₂₈ •C ₃₀] FATTY ACID C ₁₆ ~C ₃₄ [Mainly C ₂₂ •C ₂₄ •C ₂₆ The amount of C ₂₈ •C ₃₀ •C ₃₂ is small]	(High acid value) 67~72% (Low acid value) 68~75% ALCOHOL C ₂₄ ~C ₃₄ FATTY ACID C ₁₆ ~C ₁₈ [C ₁₆ is about 82~94%]	97~99% C ₄₂ ~C ₆₂	Approx. 35% C ₃₈ ~C ₅₂
Free fatty acid	3~4% C ₁₆ ~C ₃₂ [Mainly C ₂₀ •C ₂₆ •C ₂₈ •C ₃₀]	10~20% C ₂₀ ~C ₃₅ [Almost C ₃₀ •C ₃₂ •C ₃₄]	4~7% C ₁₆ •C ₁₈ •C _{18:1} •C _{18:3} [Mainly C ₁₆]	(High acid value) 13~16% C ₁₆ ~C ₃₂ Mainly C ₂₄ (Low acid value) 5~9% C ₁₆ ~C ₃₄ Mainly C ₃₂	1~3%	
Free alcohol	10~12% C ₁₆ ~C ₃₂	10~15% C ₂₆ ~C ₃₄ [Mainly C ₂₈ ~C ₃₂]		1~2% C ₂₄ ~C ₃₂ [Mainly C ₃₀]		
Hydrocarbon	1~3% C ₂₀ ~C ₃₃ [Mainly C ₂₇ •C ₂₉ •C ₃₁]	40~45% C ₂₈ ~C ₃₃ [About 70% is C ₃₁]		(High acid value) 10~14% C ₂₁ ~C ₃₅ (Low acid value) 16~21% C ₂₃ ~C ₃₅		Approx. 65% C ₁₇ ~C ₃₃
ETC	Resin 3~4% Lactone 3~5%	Resin 15~18%	Phospholipid Squalene	(Low acid value) About 4% of Glyceride (C ₁₄ •C ₁₆ •C ₁₈)		

DSC Chart



Create new values with you



We cover a broad range of business fields, including chemicals, food products and cosmetics, which is why we are able to keep coming up with highly novel perspectives that are not bound by existing values.



Countless ideas for unique values

Rice wax that is created when refining rice oil is used for a wide variety of purposes, from coating for food products such as confectionary to industrial products like printer cartridges.



Collaborative research with customers

In order to meet the true needs of customer, we provide active support for the research and development of materials. In collaborative research carried out with a major cosmetics manufacturer, we have conducted a series of trials that have included adjusting the resin concentration levels in carnauba wax, resulting in the development of carnauba resin, a plant-based polymer. This has helped improve conventional mascara's capability to retain the shape of eyelashes.

Customizing

We will provide the most suitable natural wax in accordance with the purpose. Please contact us for any challenges.



Carnauba Wax

INCI name : Copernicia Cerifera (Carnauba) Wax

Chinese INCI : 巴西棕榈树 (COPERNICIA CERIFERA) 蜡

Origin : Brazil

Carnauba wax is isolated from leaves from *Copernicia cerifera Martius* that is the palm family tree.

Copernicia cerifera Martius is grow in northern Brazil and part of Argentine and Paraguay which is an arid zone and it is 7 to 18 meters high tree.

Since it grows slow, it takes about 15 years to obtain wax.

The high quality of carnauba wax is from a tip of leaves, and the content of high quality of carnauba wax is 20% in total wax quantity.

About 300g is obtained from 1 tree, which means 60g high quality wax from 1 tree.

Products line-up

Trade Name	Form	Packing size	Characteristic	Application	Dosage(% in Formulation)	Function in formulation	Melting Point (°C)	Resin (%)
TOWAX-1F3	Flake	20kg	De-resin product / Could solidify the low viscosity of liquid paraffin	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Emollint Thickner	80-86	Less than 1%
TOWAX-1B4	Block	5kg	High resin product	Mascara	1 - 3	Film former	62~74	approx.95%
TOWAX-1F6	Flake	20kg	Stable solidification effect with liquid paraffin	Lip stick	1 - 10	Thickner	80-86	approx.5%
TOWAX-16F	Powder	10kg	Powder type of TOWAX-1F6 / Small particle size (20µm)	Powder foundation	1 - 3	Thickner	80-86	approx.5%
TOWAX-1F8	Flake	20kg	Good emulsification effect	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Thickner	80-86	approx.5%
TOWAX-1F12	Flake	20kg	High-resin product / High viscosity	Mascara Eye liner	1 - 5	Film former	80-86	approx.10%
TOWAX-13F	Flake	20kg	Food additives grade	Food additives General cosmetics	1 - 10	Emollint Thickner	80-86	approx.5%
TOWAX-131	Powder	20kg	Spherical powder	Cleansing foam Body wash	1 - 10	Scrub	80-86	approx.5%

Candellila Wax

INCI name : Euphorbia Cerifera (Candelilla) Wax

Chinese INCI :小烛树 (EUPHORBIA CERIFERA) 蜡

Origin : Mexico

Candellia wax is obtained from *Euphorbia cerifera* Alcocer, *Euphorbia antisiphilitica* Zuccarini and *Pedilanthus pavonis* Boissier.

Euphorbia cerifera Alcocer, *Euphorbia antisiphilitica* Zuccarini and *Pedilanthus pavonis* Boissier grow in Mexico where is 1000 – 2000 altitude.

These plants produce candellia wax to protect themselves from severe condition, such as high temperature, low temperature and arid climate.

TOA KASEI uses *Euphorbia cerifera* Alcocer and the quality is strictly controlled as well as its condition of cultivation and harvest. TOA KASEI's candellia wax is complied with CITES standard.

The content of candellia wax is 2% in the plant and candellia wax is consist of esters of fatty acid and high alcohol, free fatty acid, free high alcohol and hydrocarbon.

It is known that 1,000 pieces plant is necessary to obtain 13kg of candellia wax.

Products line-up

Trade Name	Form	Packing size	Characteristic	Application	Dosage(%) in Formulation	Function in formulation	Melting Point (°C)	Resin (%)
TOWAX-4F2	Flake	20kg	Good solidification / CITES Certification	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Emollint Thickner	68-73	approx.25%
TOWAX-4F4	Flake	20kg	De-resin / Film formation / Good solidification	Eye make-up product	1 - 5	Emollint Thickner	70-75	Less than 1%

Product introduction

Rice Wax

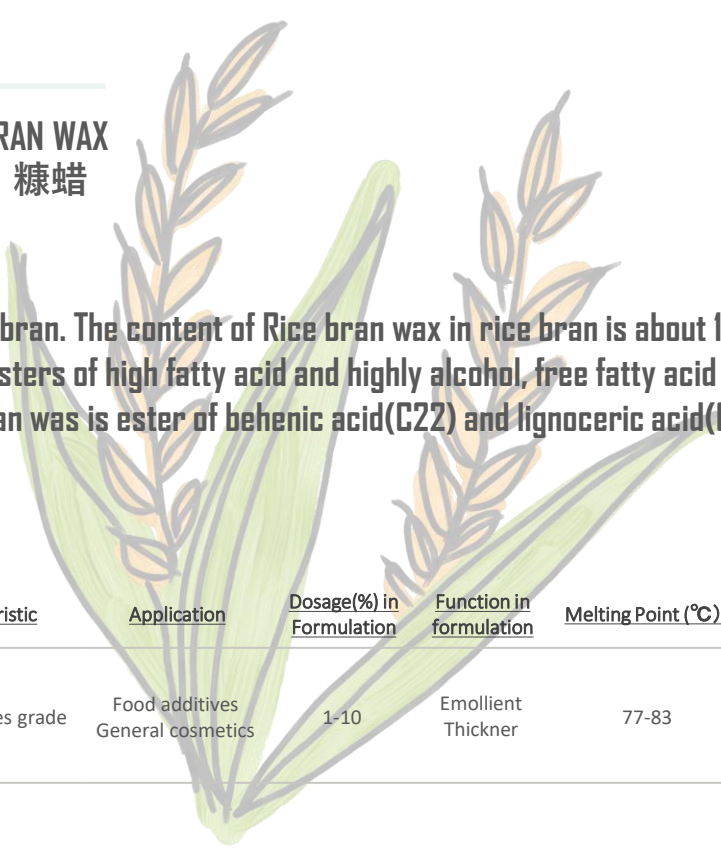
INCI name : DRYZA SATIVA (RICE) BRAN WAX

Chinese INCI : 稻 (DRYZA SATIVA) 糠蜡

Origin : Japan, South-East Asia

Rice bran wax is isolated from rice bran. The content of Rice bran wax in rice bran is about 1.5%. The rice bran wax is consisting of esters of high fatty acid and highly alcohol, free fatty acid and hydrocarbon. Main ester of Rice bran was is ester of behenic acid(C22) and lignoceric acid(C24).

Products line-up



Trade Name	Form	Packing size	Characteristic	Application	Dosage(%) in Formulation	Function in formulation	Melting Point (°C)	Resin (%)
TOWAX-3P4	Pellet	20kg	Food additives grade	Food additives General cosmetics	1-10	Emollient Thickner	77-83	

Sunflower Wax

INCI name : Helianthus annuus (sunflower) seed wax
Chinese INCI :向日葵 (HELIANTHUS ANNUUS) 籽蜡
Origin : India

Sunflower wax is made from the oil of Sunflower seed (*Helianthus annuus*) and it contains a rich amount of ester. The main plantations countries are Ukraine, Russia and Argentina. Sustainability is an issue of global importance and sunflower is in the spotlight due to its ability to absorb radioactive materials and other pollutants from the soil without much harm to the plant.

Products line-up

Trade Name	Form	Packing size	Characteristic	Application	Dosage(%) in Formulation	Function in formulation	Melting Point (°C)	Resin (%)
TOWAX-6F2	Flake	20kg	Good transparency / good solidification at low temperature / high content of ester	Emulsion Liquid foundation Lip stick Powder Foundation Hair wax Make-up product	1 - 10	Emollient Texturizer Thickner	70-90	

Rose Wax

INCI name : Rosa damascena flower wax
Chinese INCI :突厥蔷薇 (ROSA DAMASCENA) 花蜡
Origin : Bulgaria

Rose wax is isolated from the *Rosa damascena* flower of Bulgaria. *Rosa Damascena* has a long history with origins as far as Ancient Persia. And since the 17th century, the oil of *Rosa Damascena* has impacted the livelihood, culture and traditions of Bulgarians. We developed the high-refined *Rosa damascena* flower wax by using our purification technology.

Products line-up

Trade Name	Form	Packing size	Characteristic	Application	Dosage(%) in Formulation	Function in formulation	Melting Point (°C)	Resin (%)
TOWAX-6B2	Block	1kg	Low melting point / Fragrance of damask rose	Lip sticks Hair wax Hair colon Emulsion	1 - 3	Emollient Thickner Natural fragrance	50-63	



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Product list



<u>Trade Name</u>	<u>Form</u>	<u>INCI Name</u>	<u>Characteristic</u>	<u>Application</u>	<u>Dosage(%) in Formulation</u>	<u>Function in formulation</u>	<u>Melting Point (°C)</u>	<u>Resin (%)</u>
TOWAX-1F3	Flake	Copernicia Cerifera (Carnauba) Wax	De-resin product / Could solidify the low viscosity of liquid paraffin	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Emollient Thickner	80-86	Less than 1 %
TOWAX-1B4	Block	Copernicia Cerifera (Carnauba) Wax Extract	High resin product	Mascara	1 - 3	Film former	62~74	approx.95%
TOWAX-1F6	Flake	Copernicia Cerifera (Carnauba) Wax	Stable solidification effect with liquid paraffin	Lip stick	1 - 10	Thickner	80-86	approx.5%
TOWAX-16F	Powder	Copernicia Cerifera (Carnauba) Wax	Powder type of TOWAX-1F6 / Small particle size (20µm)	Powder foundation	1 - 3	Thickner	80-86	approx.5%
TOWAX-1F8	Flake	Copernicia Cerifera (Carnauba) Wax	Good emulsification effect	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Thickner	80-86	approx.5%
TOWAX-1F12	Flake	Copernicia Cerifera (Carnauba) Wax	High-resin product / High viscosity	Mascara Eye liner	1 - 5	Film former	80-86	approx.10%
TOWAX-13F	Flake	Copernicia Cerifera (Carnauba) Wax	Food additives grade	Food additives General cosmetics	1 - 10	Emollient Thickner	80-86	approx.5%
TOWAX-131	Powder	Copernicia Cerifera (Carnauba) Wax	Spherical powder	Cleansing foam Body wash	1 - 10	Scrub	80-86	approx.5%
TOWAX-3P4	Pellet	ORYZA SATIVA (RICE) BRAN WAX	Food additives grade	Food additives General cosmetics	1 - 10	Emollient Thickner	77-83	
TOWAX-4F2	Flake	Euphorbia Cerifera (Candelilla) Wax	Good solidification / CITES Certification	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 10	Emollient Thickner	68-73	approx.25%
TOWAX-4F4	Flake	Euphorbia Cerifera (Candelilla) Wax	De-resin / Film formation / Good solidification	Eye make-up product	1 - 5	Emollient Thickner	70-75	Less than 1 %
		Paraffin /						
TOWAX-5B2	Flake	Copernicia Cerifera (Carnauba) Wax / Pentaerythrityl Hydrogenated rosinate	Almost same properties with TOWAX-4F2	Emulsion Liquid foundation Lip stick Powder foundation Hair wax	1 - 20	Emollient Texturizer Thickner Fragrance	76~82	approx.1.5%
TOWAX-6B2	Block	Rosa Damascena Flower Wax	Low melting point / Fragrance of damask rose	Lip sticks Hair wax Hair colon Emulsion	1 - 3	Emollient Thickner	50~63	-
TOWAX-6F2	Flake	Helianthus Annuus (Sunflower) Seed Wax	Good transparency / Good solidification at low temperature / High content of ester	Emulsion Liquid foundation Lip stick Powder Foundation Hair wax Make-up product	1 - 10	Emollient Texturizer Thickner	73.5~79.5	-