



技 術 資 料

Technical Information



High refractive index coating agent

ORGATIX PC-200



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High refractive index coating agent, which we developed, are based upon Titanium oligomer's high coating performance, therefore they could easily achieve high refractive index coating by simple roll to roll process.

1. Features:

- High refractive index coating is made by simple Roll to Roll Heating process.
→Refractive index can be adjustable from 1.6 to 1.9.
- By Wet Coating process → No need for expensive equipment of Dry Coating process
- Inorganic Coating (by TiO₂) → High transparency and heat resistance
- Containing no UV resins, nor fillers
→Thin (nm) coat, high deformational performance and feasibility with base material layer

2. Major Industrial Use:

- Optical film → antireflective film
- Optical glass → touch panel, solar panel
- Optical communication → optical waveguide, plastic optical fiber
- Optic lens, optical electro-device

3. Products list and Physical properties table

Items	ORGATIX PC-200
Feature	lower-temperature and high-temperature combined use.multipurpose base ultrathinnes~thin film
Composition	Titanium oligomer
Appearance	pale yellow liquid
Content	31wt%
Main solvents	1-Butanol
Viscosity	7mPa·s
MITI	
TSCA	On inventory
ECL	(Trade secret)
IECSC	
REACH	Unregistered
Net/Unit of shipment of 1 order	0.9kg/ 5.4kg 15kg/ 60kg
Note	The make-to-order products

※ Above data is representing value and not guaranteed specifications.

4-1. Film Properties After Coating

Drying temperature comparison between in 140°C and 400°C

Items	ORGATIX PC-200	
Refractive index (at 633nm)	1.81	1.95
Film thickness(nm)	90	70
Total light transmittance(%)	85%	83%
Haze(%)	0.44%	0.53%
Rub fastness	not bad	very good
Contact angle(°)	49	5 or less
Coating conditions		
Curing temperature (°C)	140	400
Curing time (min)	1	60
Dilution	5.0 times	
Bar coater	No.3	
Application thickness(μm)	6.87(wet)	

Test method

Refractive index , film thickness : Reflection spectroscopy

A total light transmittance, haze : Haze meter

(Glass base: total light transmittance 92%, Haze 0.27%)

Abrasion resistance : Visual test after 10 times rub off.

Water contact angle : Contact angle gauge

4-2. Features of product

PC-200

- Low and high headed dry, both are applicable.
- Inventory in many countries resisted.

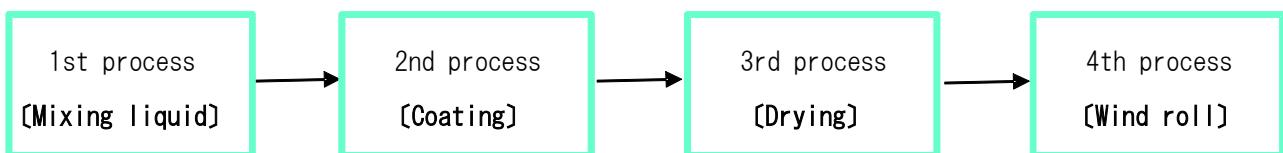
※Others

Mixing use our ORTATIX and another resin.

⇒Singly used is recommended as reaction of ORTATIX and another resin may cause gelation or precipitation by reaction with Hydroxyl and carboxy group.

5. How to use

ORGATIX PC-200 is one-liquid type. Please apply it as follows.



1st process [Mixing liquid]

List of solvent used for dilution

	Solvents	ORGATIX PC-200
Water	Water	×
Alcohol	2-propanol	○
	1-butanol	○
Ester	Ethyl acetate	△
Ketone	MEK	△
Aromatic hydrocarbon	Toluene	△
Aliphatic hydrocarbon	Heptane	○

○ : Ratio to dissolve is free △ : Outbreak of the sediment by aging

× : Cloudy(unusable)

— : No date

※Solvent(△) may dissolve by combination with solvent(○).

Dilution : Adjust dilution rate by required coating thickness. (Refer table 4-1)

2nd process [Coating]

Roll coating, spin coating, spray coating, dip coating are available.

※Avoid to reuse the left.

3rd process [Drying]

Adjust drying condition by the required refraction index

(Minimum drying requirement : 100°C×60sec)

Can improve film blushing by adding high boiling solvent in the diluted solvent.

4th process [Wind roll]

No aging required. Roll up without blocking after drying.

6. Note

PC-200 is the make-to-order products, so we will product these items after your firmed order.

7. Caution

ORGATIX has high hydrolysable, so please use promptly after opening the package. IT is also inflammable, so please refer the MSDS carefully before using our High refractive index coating agent series.

The information given in this brochure is based on the present state of our knowledge.
It shows without liability possible uses for our products.

Contact



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