



技 術 資 料

Technical Information

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ORGATIX PC-640

Use as primer for addition curing silicone



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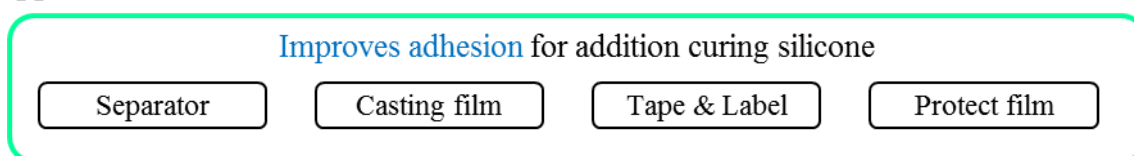
ORGATIX PC-640 is a primer providing strong adhesion for addition curing silicone coating materials.

By simply applying as a primer coat (undercoat), it prevents degradation in adhesion after exposure to air, a common weakness in existing addition curing silicone.

1. Advantages

- High adhesion performance: Significantly improves rub-off, smear and solvent resistance after exposure to air.
- High cost-effectiveness: Mold release film coated with PC-640 has less degradation in adhesion and allows for use over an extended period of time, improving the cost-effectiveness in total.
- High degree of safety: No restricted substances such as those listed under the RoHS Directive are used in the product, ensuring a high degree of safety.

2. Application



3. Properties

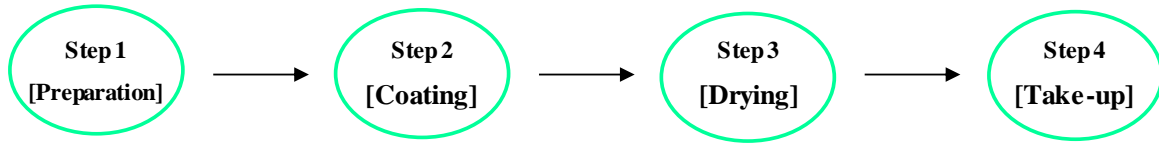
Product properties		
Product name	ORGATIX PC-640 (A)	ORGATIX PC-640 (B)
composition	Titanium polymer & Functional compounds	Functional compounds
Appearance	Pale yellow liquid	Colorless liquid
Active component content	19%	62%
Solvent	n-butanol: 51% Toluene: 30%	Toluene: 38%
Viscosity	max. 5 mPa · s	max. 5 mPa · s
UN number	1993	1993
Inventory	Japan	✓
	USA	✓
	Korea	✓
	China	✓
	Taiwan	✓
Package size	15 kg (18L CAN)	15 kg (18L CAN)

Film properties (after coating)	
Appearance	Colorless and clear
Film thickness (coated in recommend condition)	300 nm
Wettability	33.0~34.0 mN/m (dyne)
Water contact angle	60°
Blocking	No blocking

*Values listed above are typical values, not guaranteed values.

4. Usage

ORGATIX PC-640 is two-component coating material. Follow the instructions for use below:



Step 1 [Preparation]

Product mixing ratio: proportion (component A / component B = 100 / 50)

Solvent dilution factor: 6 to 7-factor (further dilute the mixed solution with solvent listed below by a factor of five)

Pot life: 10 hours after preparation (dispose of coating material which was prepared more than 10 hours ago)

Usable diluting solvent: n-butanol + solvents listed below

Hydro carbon			Alcohol		Ketone	Ester
Aliphatic		Aromatic	IPA	n-butanol	MEK	Ethyl acetate
Heptane	methyl cyclohexane	Toluene	Bad	Better*	Bad	Better
Better	Better	Good				

Better: Acceptable if mixed with n-butanol (50:50), Good: Decline in wettability, Bad: Whitish (unusable)

*Only n-butanol can be used alone as diluent.

Step 2 [Coating]

Coating amount: Approximately 6 g/m² (wet)

Coating method: Roller coating, spin coating, spray coating, etc.

*Do not reuse recovered coating fluid.

Step 3 [Drying]

Drying conditions: 90 °C to 120 °C for 30 seconds

Step 4 [Take-up]

PC-640 does not cause blocking, allowing for take-up promptly after application. PC-640 delivers performance immediately upon drying so it can even be used on a double-coating line.

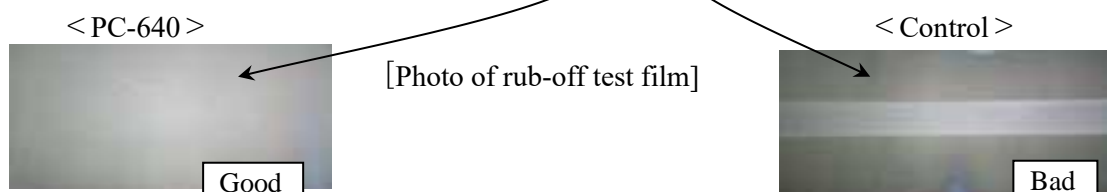
5. Film properties

Applied addition curing silicone on a film coated with ORGATIX PC-640. Exposed the film to the air and measured the properties below:

Primer	Peel strength (mN/25mm)	Adhesion strength retention ratio (%)	Rub-off (Visual)	Resistance to ethanol (Visual)	Peel strength after rubbing (mN/25mm)
ORGATIX PC-640	50	85 (Before exposure: 97)	Good	Good	less than 100
Control	70	85 (Before exposure: 94)	Bad	Bad	2,500

Release agent: Addition curing silicone type

Exposure condition: 70°C x 90% x 20 hours



***Coating conditions**

< Coating condition of primer >

Primer: ORGATIX PC-640

Substrate: Non-coated PET film, 50 μm thick

Coating method: Apply with a wire bar coater #4 by hand
in the above recommended condition.

Remarks: Coating release agent within 30 minutes
after drying

< Coating condition of release agent >

Release agent: Addition curing silicone type

Addition amount: Base resin / Catalyst = 100 / 1.5 (weight)

Dilution factor: 10-factor

Diluting solvent: Toluene / MEK = 1 / 1 (weight)

Drying condition: 130°C for 30 seconds

Coating method: Apply with a wire bar coater #4 by hand.

Coating amount: 6g /m² (wet)

***Test conditions**

Exposure conditions: Let the film stand at 70 °C, 90% RH for 20 hours.

Peel strength and adhesion strength retention ratio: Compliant with JIS Z 0237.

Rub-off: Scraped the film with fingers five times and visually checked for stripping of film.

Resistance to ethanol: Applied a load of 100 g to the film with an absorbent cotton dampened with ethanol and scraped the film surface 100 times. Visually checked for stripping of film.

Peel strength after rubbing: Rubbed the surface of the film with an absorbent cotton under a load of 500 g 100 times and measured peel strength.

6. Important notice

ORGATIX PC-640 is a newly developed product. It is manufactured on a per-order basis (in batches of 90 kg). Contact your local sales representative in advance if you need the product.

Instructions for use

The product is susceptible to hydrolysis. Use as soon as possible once opened. Highly flammable solvents are used in the product. Make sure to read the Safety Data Sheet (SDS) before use.

This material was issued with the purpose of providing information based on the data available at the present time. No warranty is made as to the information given.

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