



技 術 資 料

## Technical Information



### Anchor Coating Agent **ORGATIX WS-700**



**Matsumoto Fine Chemical Co.,Ltd.**

HEAD OFFICE 5-13-2, Minamiyawata, Ichikawa-shi, Chiba,  
272-0023 JAPAN

TEL +81-47-393-6330

FAX +81-47-393-1063

OSAKA OFFICE Kawaramachi SF Bldg. 6F  
3-4-15, Kawaramachi, Chuo-ku, Osaka, 541-0048 JAPAN

TEL +81-6-7654-6862

FAX +81-6-7655-2087

URL:<http://www.m-chem.co.jp/>

## 「ORGATIX WS-700」

Our ORGATIX WS series anchor coating agents were developed for the extrusion lamination of polyethylene onto a film substrate, and they give a lamination film excellent in adhesion, sealing strength, moisture resistance, and gas-impermeability in comparison with films laminated with a conventional anchor coating.

ORGATIX WS-700 is based on a water soluble polyethylenimine modified crosslinkingly. It is odorless, and advantageous in terms of versatility, flexibility, and working stability. In addition, the solubility in water makes them free from problems of water pollution.

### A. Physical Properties

Trade Name	appearance	content (%)	viscosity (30°C)	diluents
ORGATIX WS-700	pale white liquid	9	20mPa·s	water methyl alcohol

### B. Characteristics

ORGATIX WS-700 comprises a water soluble polyethylenimine resin crosslinkingly modified with a water soluble titanate compound. It is odorless, and exhibits high adhesion strength on plain and inked surfaces. WS-700 is the most versatile among water soluble anchor coatings.

### C. Application

ORGATIX WS-700 is water soluble, and dilutable with an aqueous alcohol.

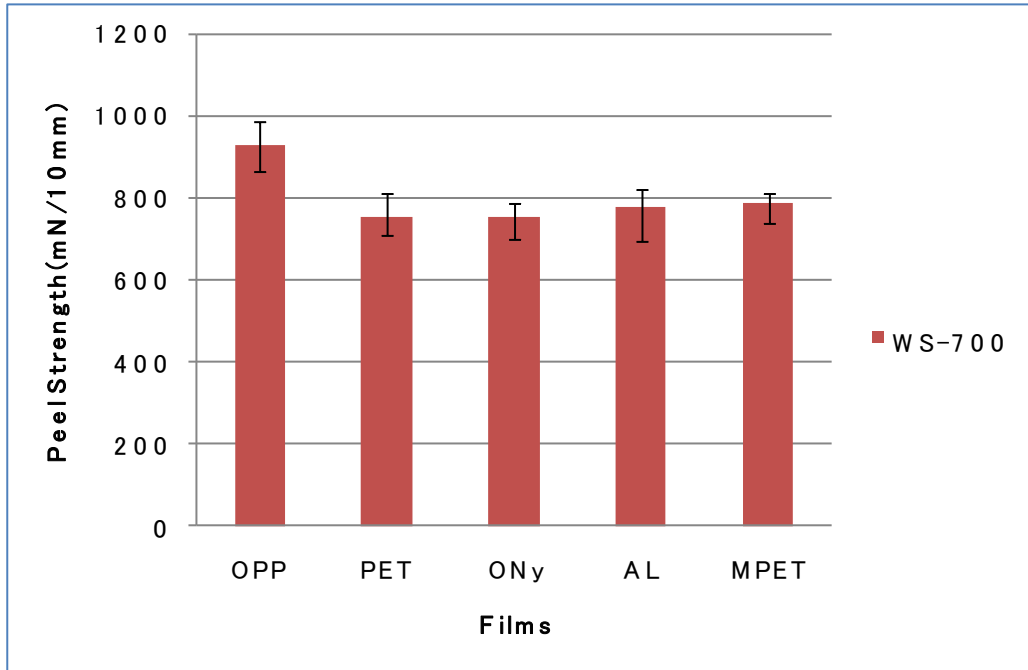
Water and alcohol (methanol, ethanol, iso-propanol) are mixed in a volume ratio of alcohol/water = 4/1 to give a dilute solution. To 25 parts by volume of the dilute solution, 1 part by volume of WS-700 is added, mixed thoroughly, and then coated onto a film substrate using a roll-coater. The coated substrate is dried thoroughly.

#### Note:

1. The ratio of water and alcohol has no serious influence. However, 80% or more alcohol may elute ink from the film substrate, and 20% or more water may delay drying.
2. A residual of WS-700 solution is usable. However, it should be replaced with a fresh one, when a heavy clouding is observed.
3. Off-line processing should be avoided, because of possible blocking during lamination operation.
4. Drying should be carried out thoroughly. Insufficient drying may result in a poor adhesion.

## D. Test Results

### WS-700 Peel Strength on the Various Film Substrates

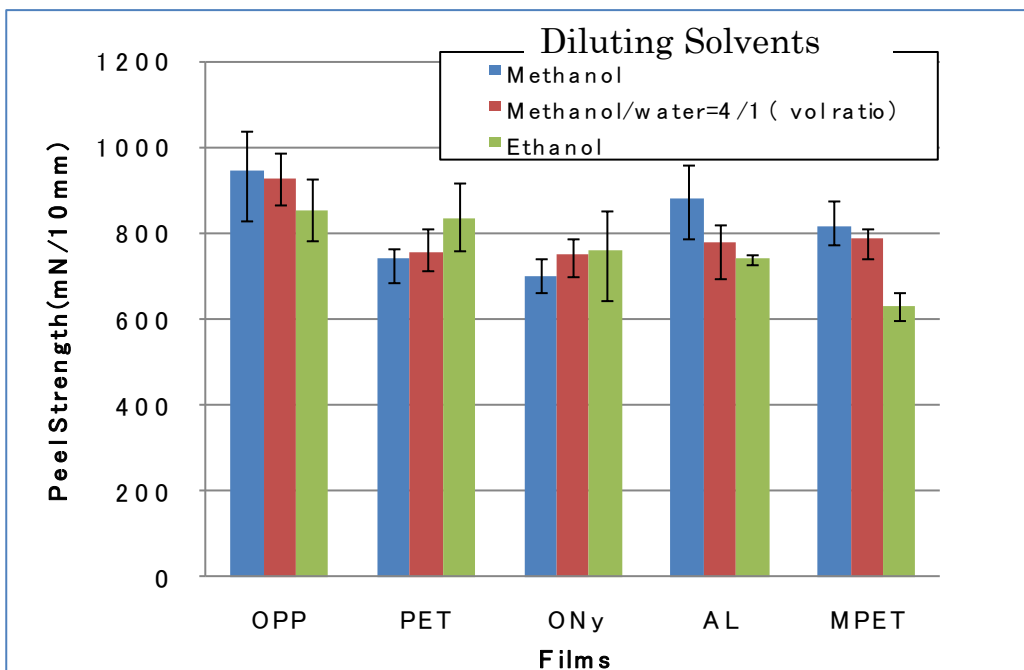


\*Diluting solvent : Methanol/Water=4/1(Vol ratio)

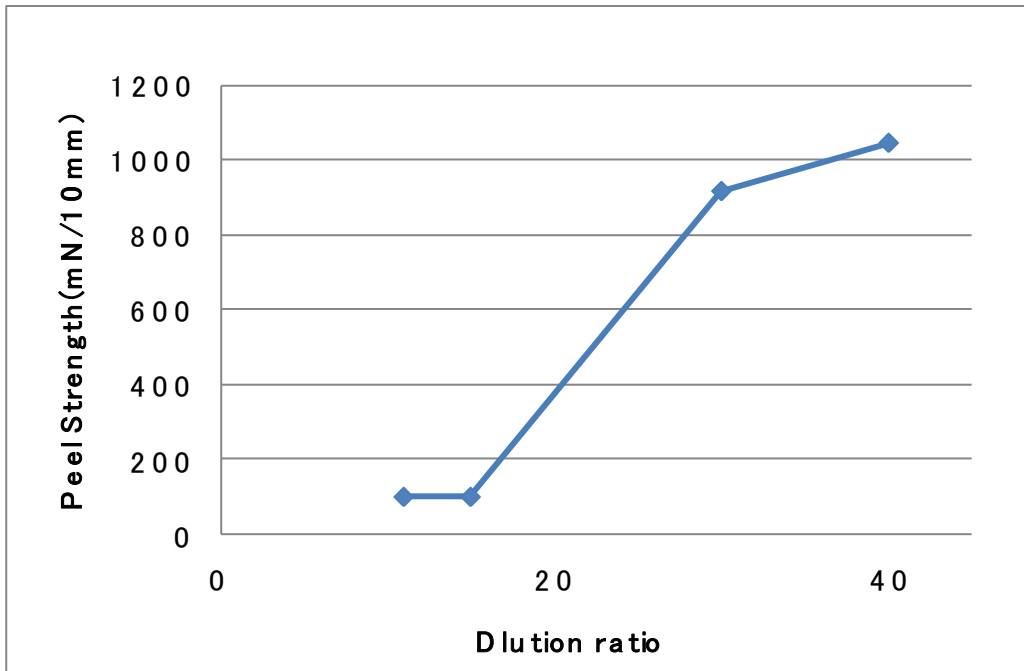
#### Films:

- OPP** : U-1 20 $\mu$ m (corona treatment) (Mitsui Chemical Tohcello, Inc.)
- PET** : E5102 12 $\mu$ m (corona treatment) (TOYOBO Co., Ltd.)
- ONy** : SANTNYL SNR 25 $\mu$ m (corona treatment) (Mitsubishi Plastics, Inc.)
- AL** : JIS H4160 1N30 7 $\mu$ m (TOYO ALUMINIUM K.K.)
- MPET** : DIALUSTER 12 $\mu$ m (REIKO Co., Ltd.)

### WS-700 Effect of Various Diluting Solvents for the Peel Strength

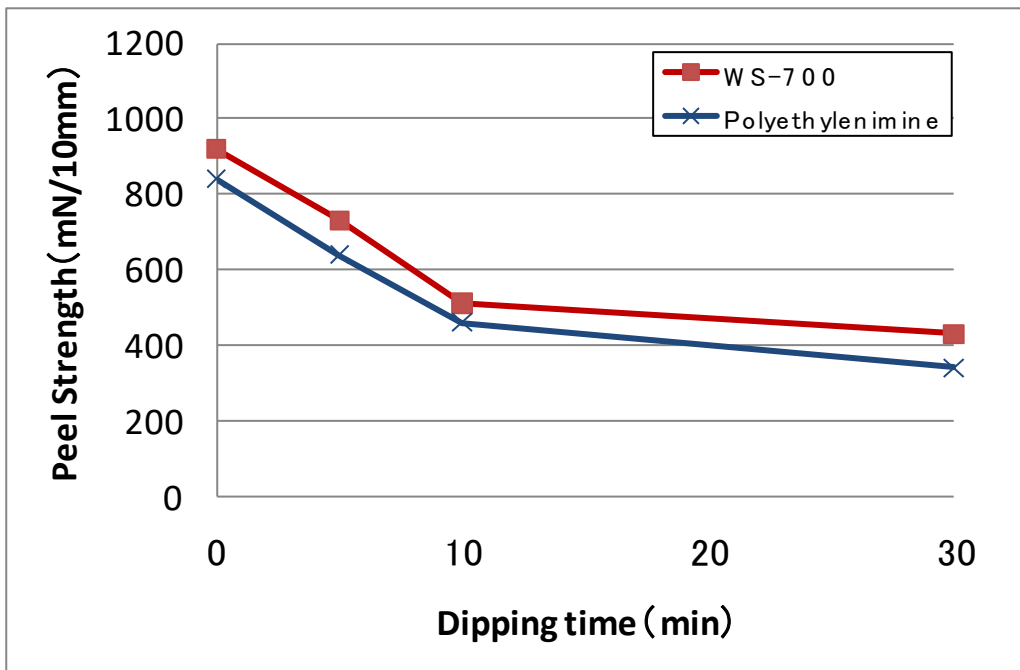


WS-700 Effect of Dilution ratio for the Peel Strength (OPP)



\*Diluting solvent: Methanol/Water=4/1 (Vol. ratio)

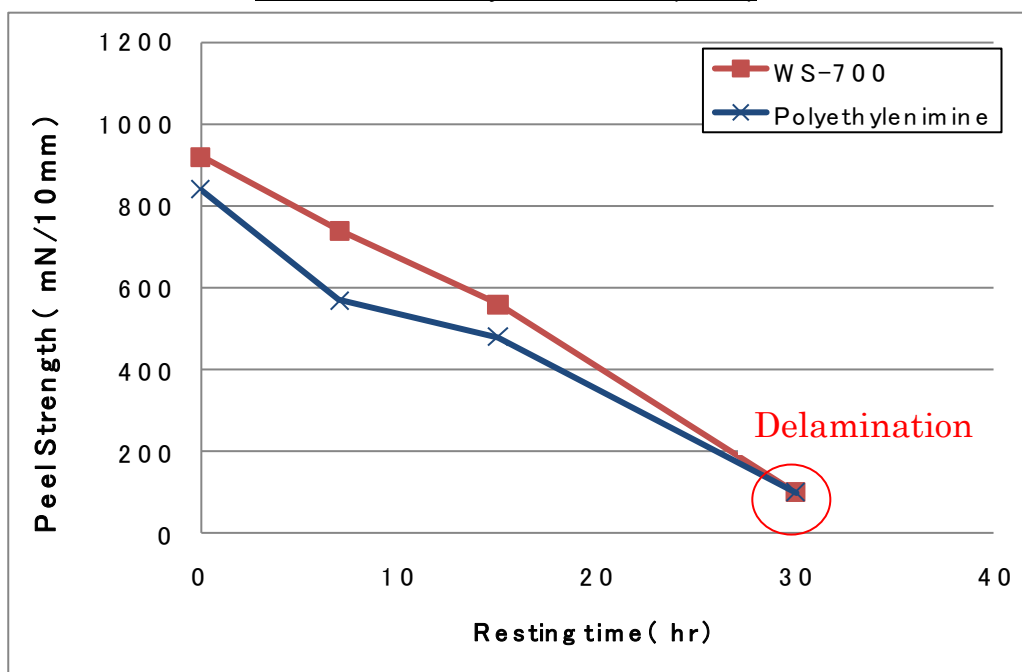
WS-700 Water resistance (OPP)



\*Test Condition: It dipped in the water(30°C) for a predetermined time.

\*Diluting solvent: Methanol/Water=4/1(Vol. ratio)

### WS-700 Humidity resistance (OPP)



\*Test Condition : It put under 40°C,90%RH for a predetermined time.

\*RH : Relative Humidity

\*Diluting solvent: Methanol/Water=4/1(Vol. ratio)

#### Lamination Conditions:

PE thickness	30μm
Extrusion temperature	310°C
Lamination speed	30m/min
Dilution ratio	25/1(Solvent/ ORGATIX)

#### Measurement condition of Peel Strength:

Testing machine: TENSILON RTG-1310(A&D Company, Limited)  
Peel speed: 20mm/min  
Width of film sample: 10mm

(The above data are based on the results of our test, and the figures may vary with processing conditions, film composition, etc.)

Contact Us: Matsumoto Fine Chemical Co.,Ltd.  
5-13-2, Minamiyawata, Ichikawa-Shi  
Chiba, 272-0023, Japan  
Tel: +81-47-393-6330  
Fax: +81-47-393-1063  
<http://www.m-chem.co.jp/>

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