技　術　資　料

Technical Information

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Anchor Coating Agent
ORGATIX WS-800

Matsumoto Fine Chemical Co.,Ltd.

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「ORGATIX WS-800」

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-800 is an anchor coating agent for the extrusion lamination of polyethylene onto a film substrate. This is based on a water soluble polyethylenimine.
ORGATIX WS-800 is complied with **FDA 175.105 and EU 2002/72/EC.**

A. Physical Properties

Trade Name	appearance	content(%)	Viscosity (30℃)	diluents
ORGATIX WS-800	Pale yellow liquid	9.5	12mPa·s	water

B. Characteristics

ORGATIX WS-800 is odorless, and exhibits high adhesion strength on plain and inked surfaces. WS-800 is the most versatile among water soluble anchor coatings.

C. Application

ORGATIX WS-800 is water soluble, and dilutable with an aqueous alcohol.

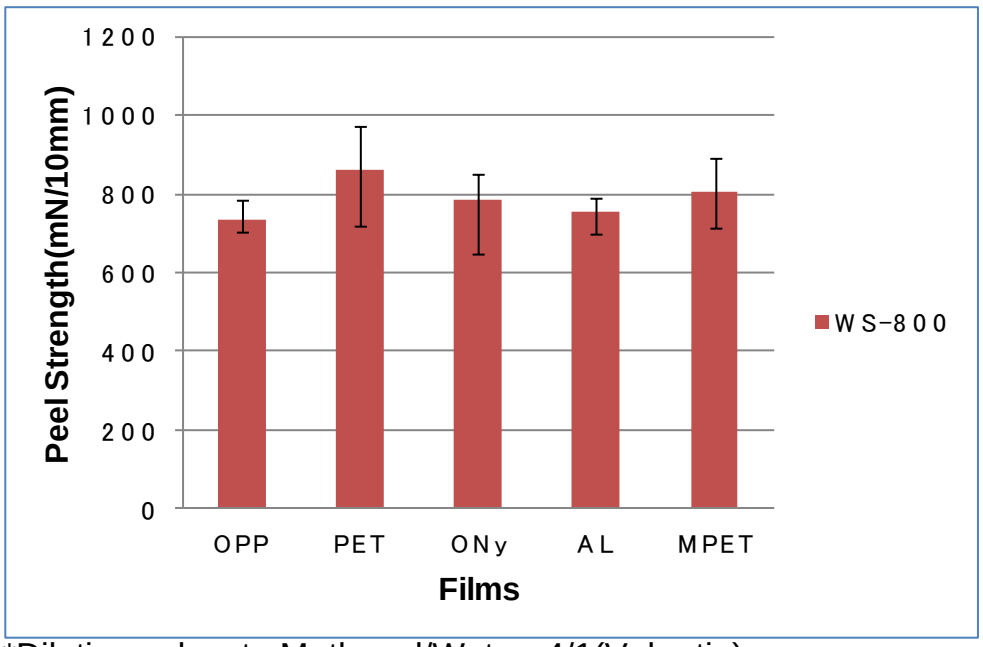
Water and alcohol (methanol, ethanol, iso-propanol) are mixed in a volume ratio of alcohol/water = 4/1 to give a dilute solution. To 25 parts by volume of the dilute solution, 1 part by volume of WS-800 is added, mixed thoroughly, and then coated onto a film substrate using a roll-coater. The coated 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-800 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-800 Peel Strength on the Various Film Substrates

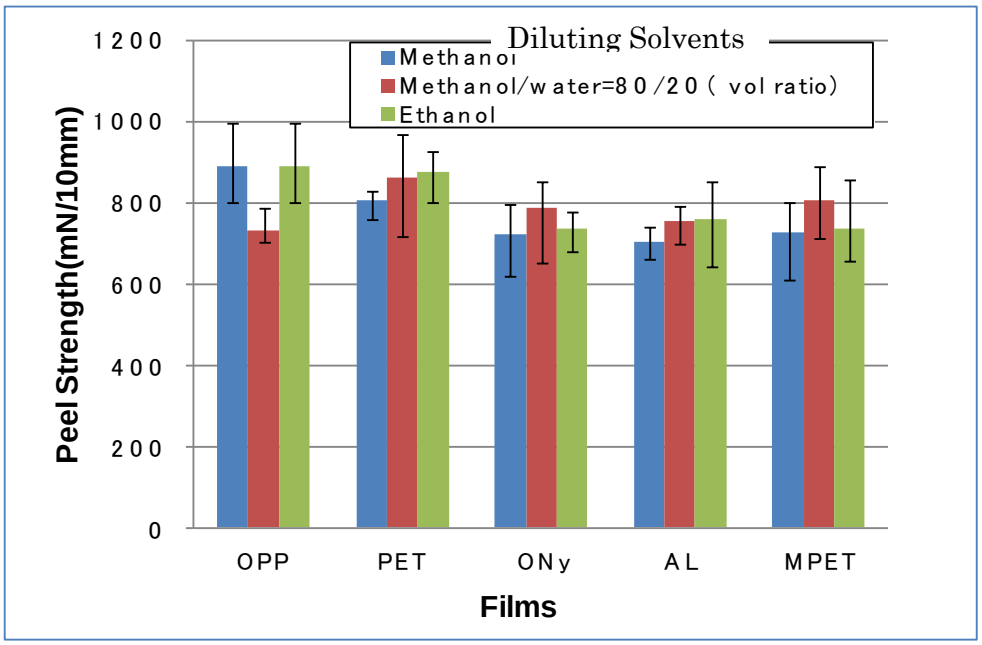


*Diluting solvent : Methanol/Water=4/1(Vol ratio)

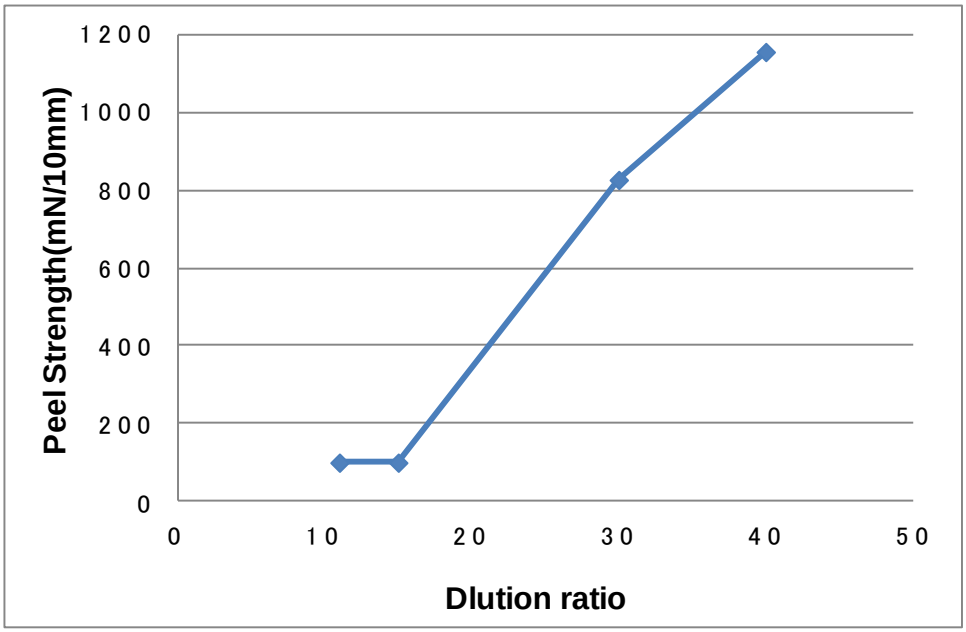
Films:

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

WS-800 Effect of Various Diluting Solvents for the Peel Strength

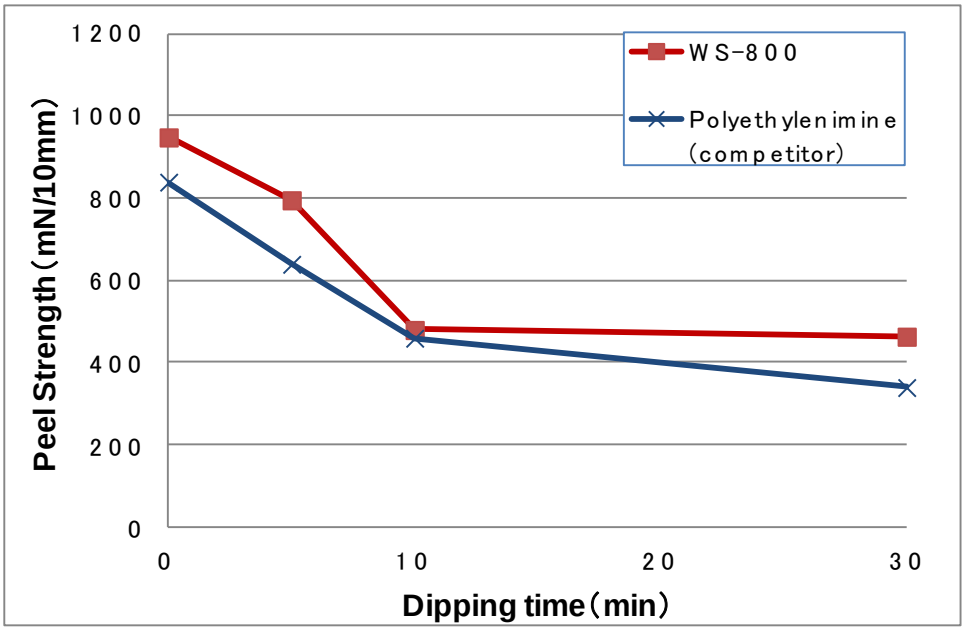


WS-800 Effect of Dilution ratio for the Peel Strength (OPP)



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

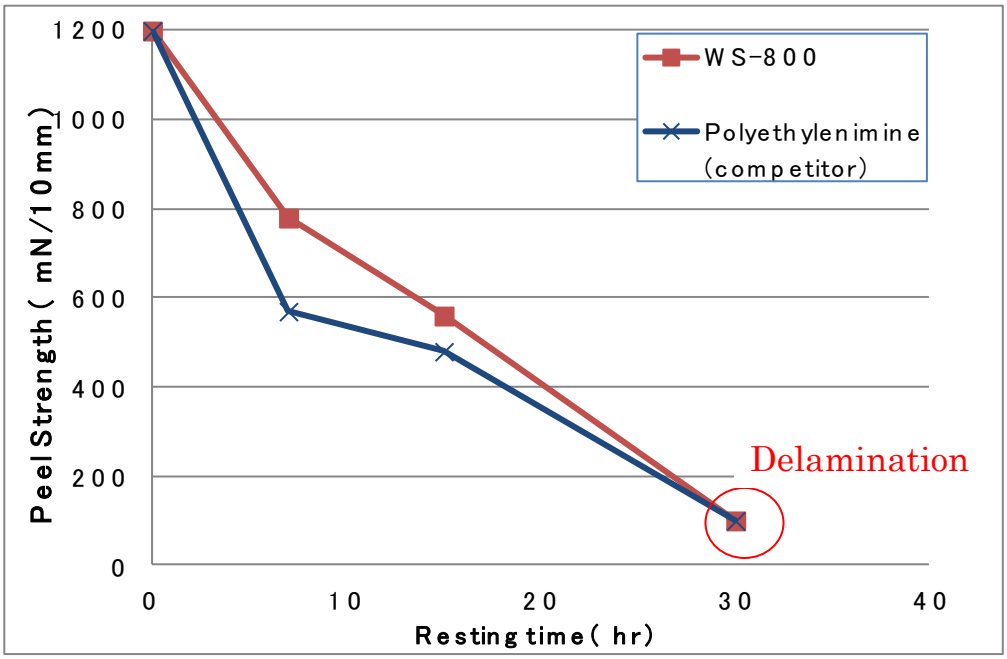
WS-800 Water resistance (OPP)



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

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

WS-800 Humidity resistance (OPP)



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

*RH : Relative Humidity

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

Coating Conditions:

Wire Bar　No.3（amount of coating:4.5g/m2(wet)）
Dry condition 100℃×30sec

Lamination Conditions:

PE thickness	30μm
Extrusion temperature	310℃
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.)

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