GOHSENAL T

NIPPON GOHSEI®

The Nippon Synthetic Chemical Industry Co., Ltd.

Introduction

- GOHSENAL T has many superior characteristics and can be used in the same manner as standard grades of GOHSENOL.
- GOHSENAL T is also easy to dissolve and has low foaming properties.

Advantage of GOHSENAL T

- The solution shows carboxylate polyelectrolyte.
- Easier to dissolve than conventional-PVOH
- The solution has good stability and fluidity, so it suits high speed coating.
- Excellent solubility with alkali solution
- Good compatibility with other water-soluble-polymer such as starch.
- Chelation ability by metal ion, especially Al, and becomes a water insoluble polymer.

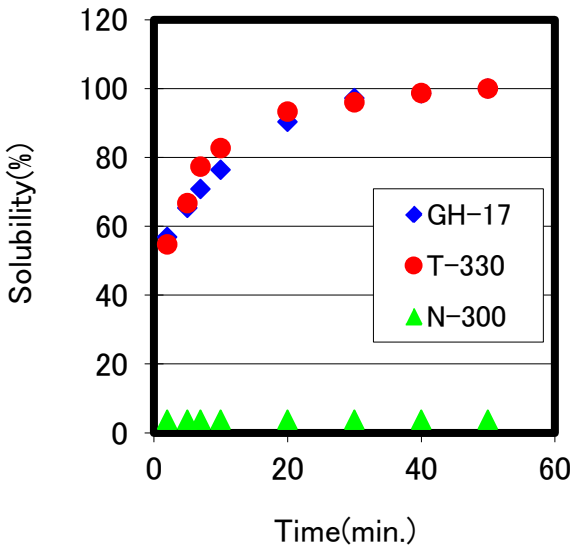
Grade and Specifications

Grades	Degree of Hydrolysis [mol%]	Viscosity* [mPa·s]	pH	V.M.
T-330H	≧99	27-32	6.0-8.0	7.0Max
T-330	95-98	27-33	6.5-7.5	7.0Max
T-350	93-95	27-33	6.5-7.5	7.0Max

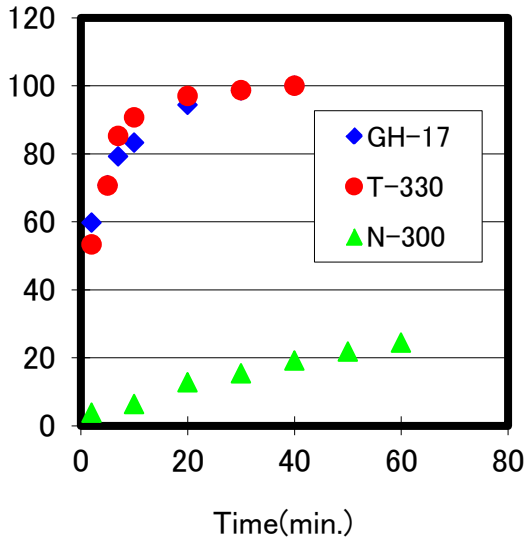
*4% solution at 20℃

Water Solubility of GOHSENAL T

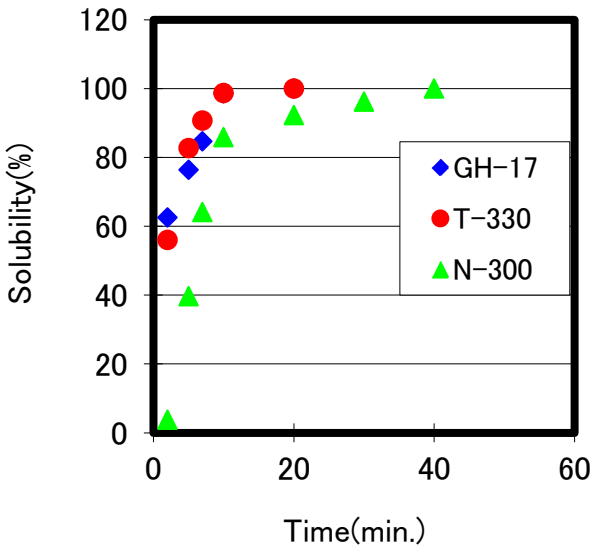
Solubility(30℃)



Solubility(50℃)



Solubility(80℃)



PVOH:25g　Water:500ml　PVOH was dispersed at 15°C

Water solubility of GOHSENAL T is superior than conventional-PVOH

Stability of GOHSENAL T solution

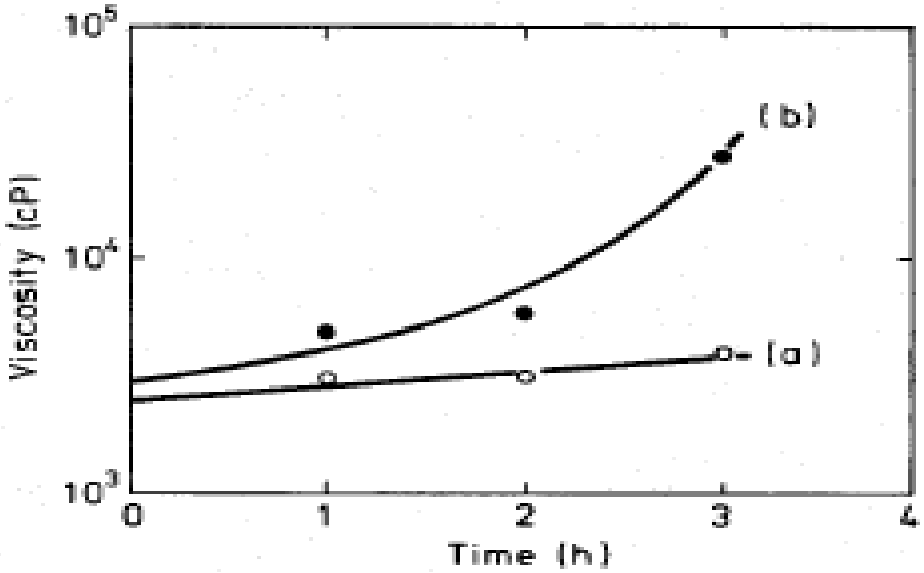
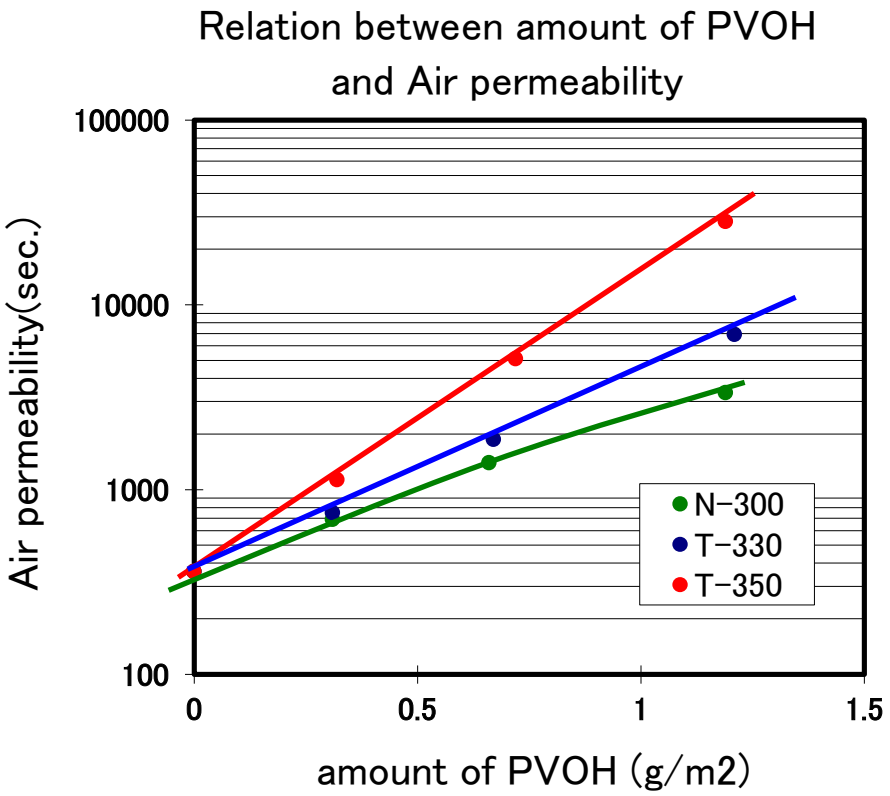


Figure 6.3 Change of viscosity of aqueous solutions of polyvinyl alcohols with age (10% solution at 5°C; 98–99% hydrolysed)

(a) Polyvinyl alcohol containing carboxylic acid: T-330H
(b) 'Conventional' polyvinyl alcohol (d.p. = 1800)

Stability of GOHSENAL T solution is superior than conventional-PVOH

Barrier property of GOHSENAL T ; Air permeability



	H.V(mol%)	Remarks
T-330	95.0～98.0	Carboxylate modified PVOH
T-350	93.0～95.0	
N-300	98.0～99.0	PVOH

Test condition

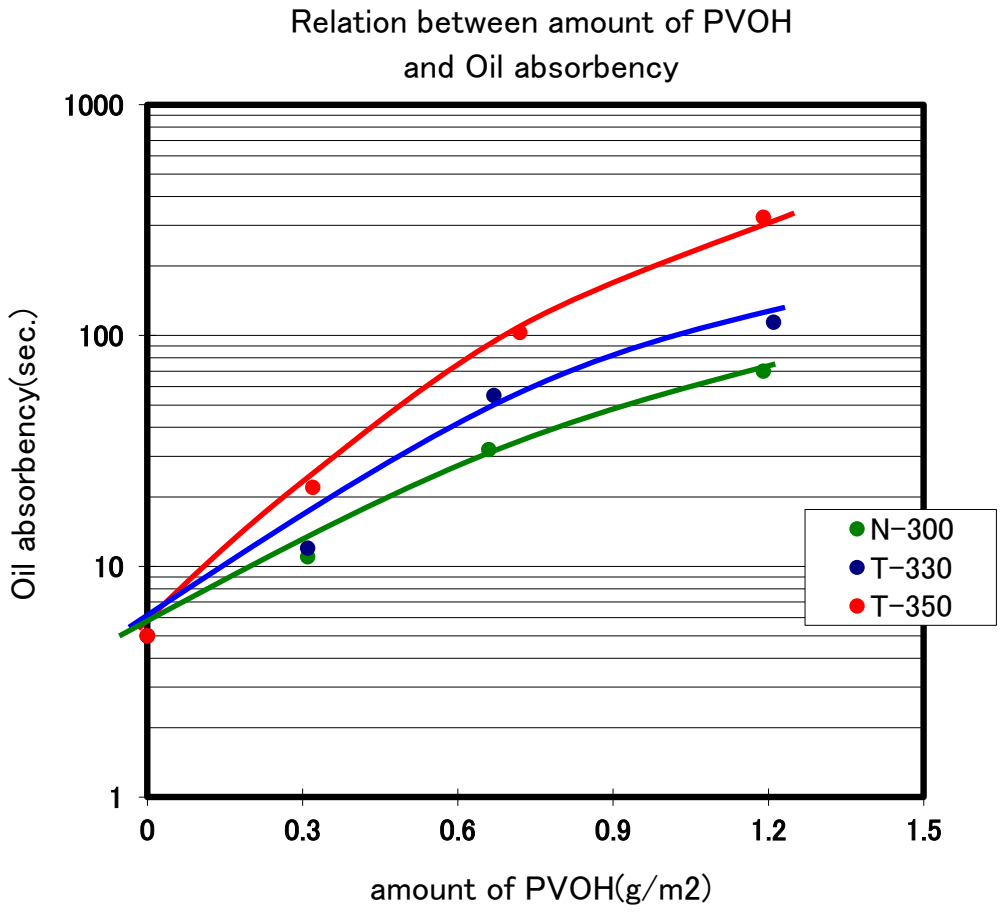
Equipment :Experimental size-press machine.	
Speed	:90m/min.
Line Pressure	:11Kg/cm
Drying	:110℃×3min.
Super Calender	:80Kg/cm × 2pass
Coating temp	:25 - 30℃
Base paper	:glassine paper

GOHSENAL T shows better barrier property

compared with conventional-PVOH

NIPPON GOHSEI

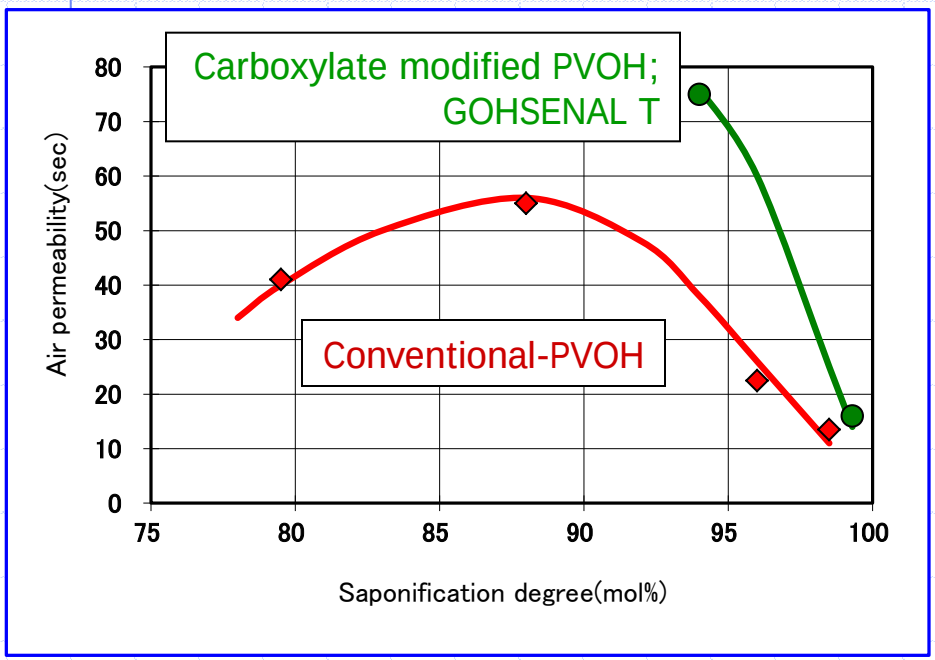
Barrier property of GOHSENAL T ; Oil absorbency



GOHSENAL T shows better barrier property

compared with conventional-PVOH

Barrier property of GOHSENAL T



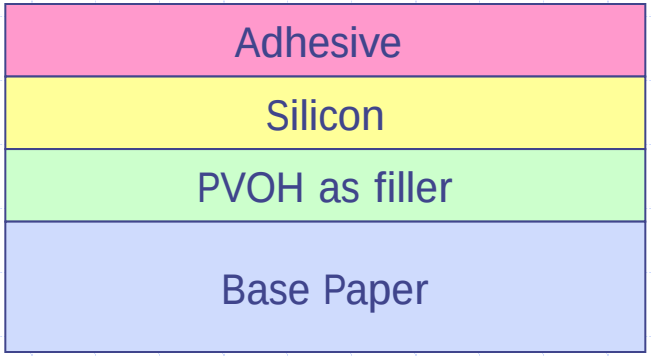
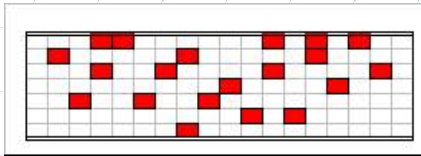
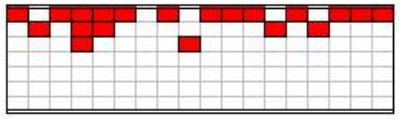


Image of the PVA distribution in the base paper layer



SV=99mol% type of PVOH



SV=88mol% type of PVOH

Comparison data between GOHSENAL T and G-type PVA

Grade	Viscosity* [mPa·s]	Degree of Hydrolysis [mol%]	Moisture Absorption at 20°C			Dissolving Speed** [Sec]
			50%RH	65%RH	81%RH	
T-330	27-33	95-98	10.0	15.4	21.3	23
GH-17	27-33	86.5-89	7.3	9.6	15.4	34
GM-14	20.5-24.5	86.5-89	7.5	10.0	16.0	28
GM-14L	16-20	86.5-89	7.5	10.0	15.1	28
N-300	25-30	98-99	7.6	9.9	15.3	42

* 4% solution at 20°C

**Dissolving Speed(sec) : Measured with 100μ of PVA film into water at 90°C

✓The moisture absorption ability of GOHSENAL T is higher than that of G-type.

✓GOHSENAL T is easier dissolved than G-type PVA.

Relationship between Humidity and Moisture Absorption.