



NIKANOL

NIKANOL Y-300

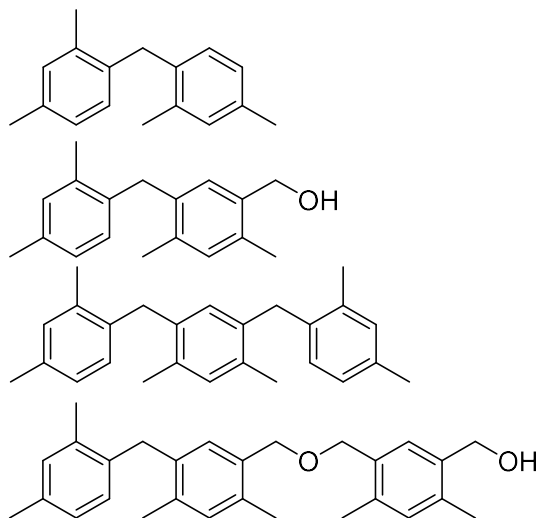
Application to Epoxy resins

FUDOW COMPANY, LTD.

Properties of NIKANOL Y-300

○ NIKANOL is an amorphous oligomer provided by m-xylene and formaldehyde.

- Almost colorless, transparent
- Liquid
- Low-viscosity
- Slightly polar oligomer
- Chemically inert



Properties of NIKANOL Y-300

Hazen	100
Viscosity (mPa · /25°C)	200~500
OH Value (mgKOH/g)	20~30
Heating Loss (%, 105°C-3hr)	<3.0
Total VOC (%)	<0.3
Mw.	400

Note: Typical properties are not standard value.

Features of NIKANOL Y-300

Features	Performance
Amorphous oligomer	Dissolve in various solvents Compatible with various resins
Liquid, low viscosity	Good workability
Almost transparent	Available for transparent products
Chemically inert	Does not inhibit the reaction of the main agent

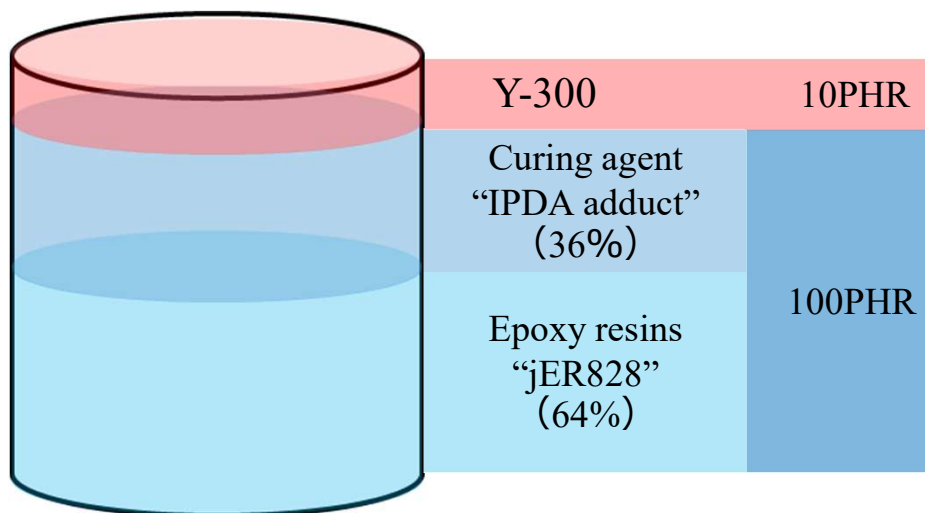
Applications of NIKANOL Y-300

- Anticorrosion paint for ship, bridge
- Floor coating
- Grout material
- Artificial marble
- Adhesive
- Sealant

Change of properties to Epoxy resins by Y-300

Epoxy resins (jER828) and curing agent (IPDA adduct) by adding Y-300 or Benzyl alcohol (BA) 10PHR. (BA: for comparison)

○Composition



Viscosity (mPa · s/25°C)

Blank value	2,650
Y-300 (10PHR)	2,000
BA (10PHR)	1,000

Viscosity – raw material (mPa · s/25°C)

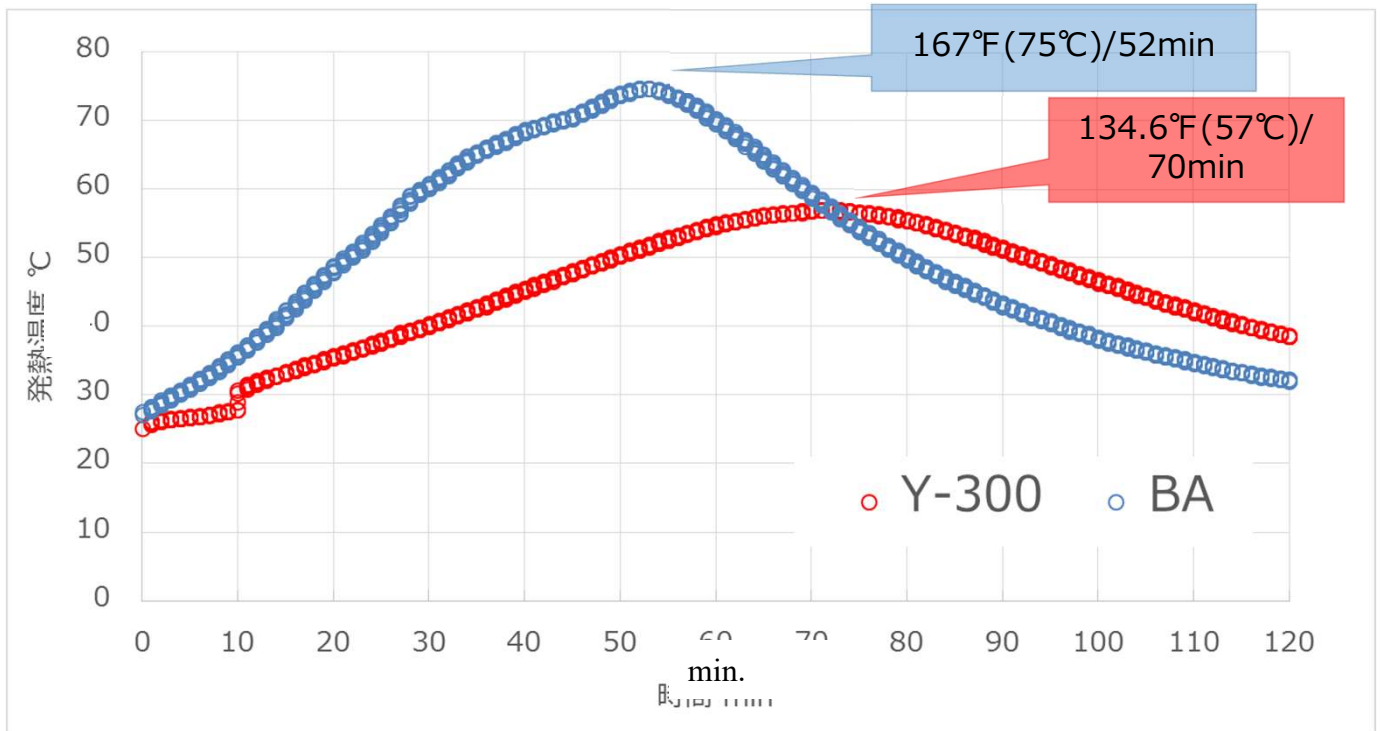
jER828	13,400
Curing agent (IPDA adduct)	540
Y-300	300
BA	8

○Painting condition

- Curing condition of coating film 23°C/50%RH 7days
- Film thickness 100μm
- Coated plate : Zinc phosphate treatment SPCC 0.8×70×150mm

1. Exothermic temperature and Pot life

○ Suppressing exothermic temperature and extend pot life

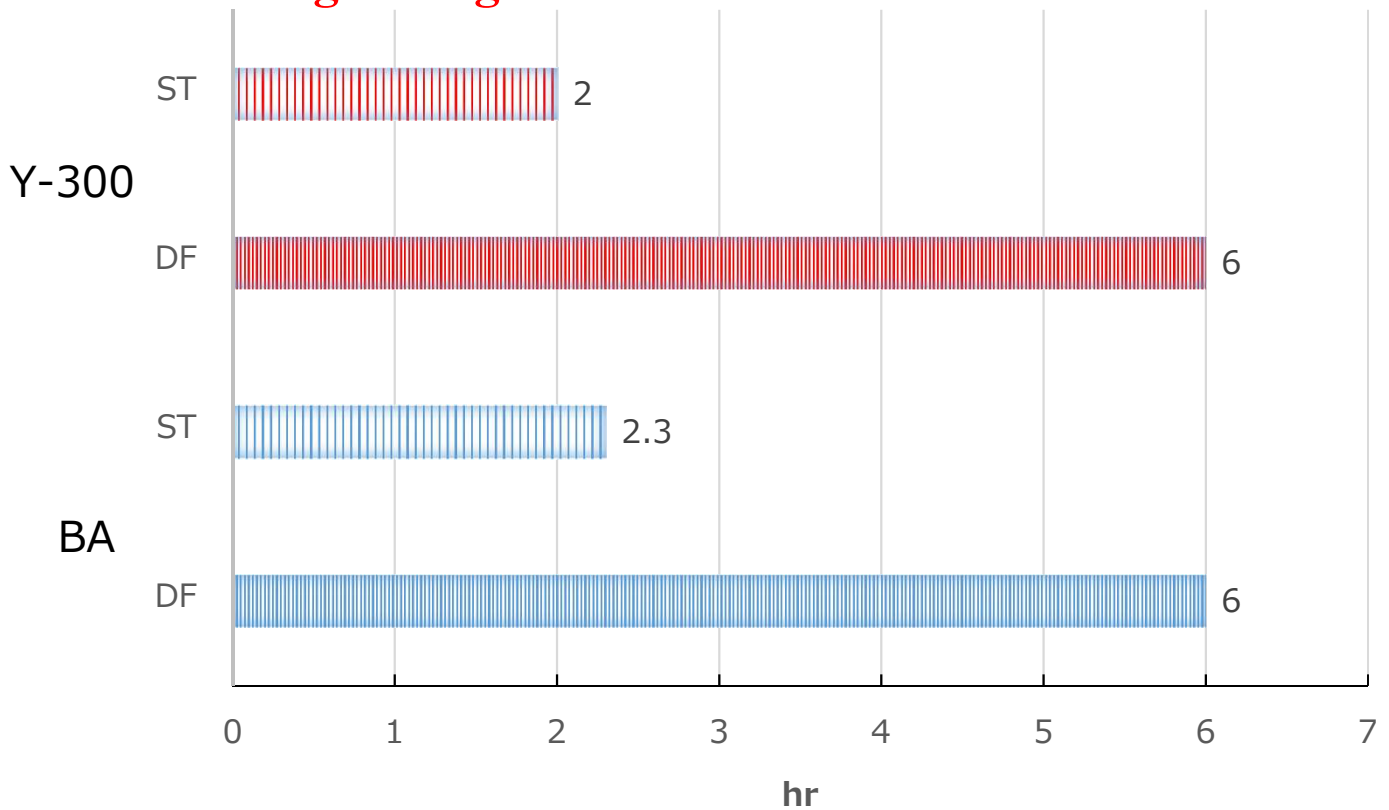


Pot life : the time which can be used

Paint capacity : 50ml

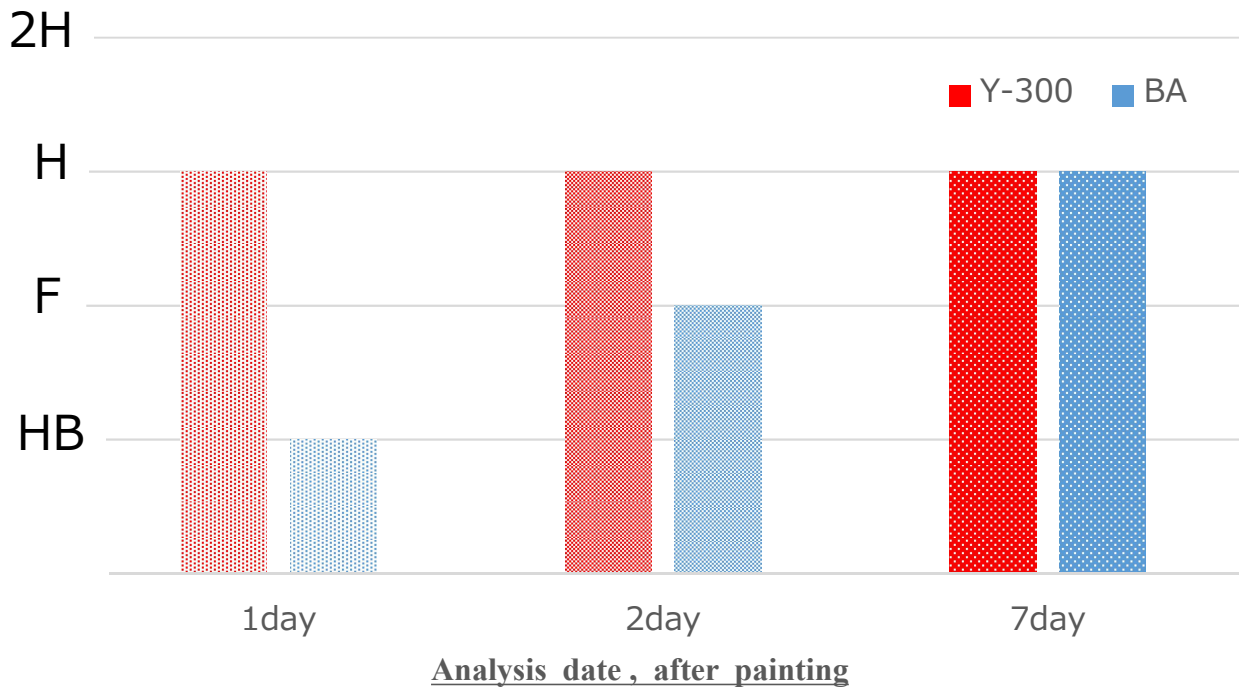
2. Curing rate

○ Maintaining curing rate



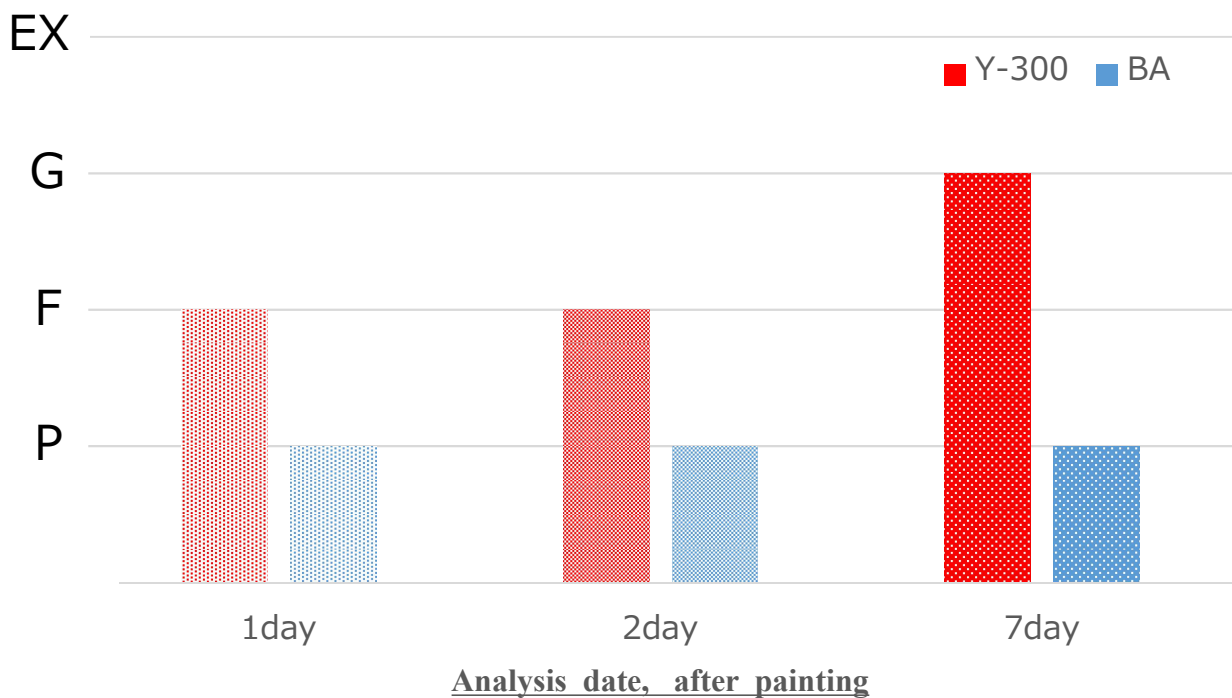
3. Pencil hardness test

○ Excellent hardness rising



4. Water resistance test

○ Excellent water resistance



Testing Method: After painting, 1/2/7 days later, put water drops with a diameter of 1 cm are placed, after 24hours, wipe off water drops and judged by visually.

EX : no change G : almost no change F : slightly whitening P : whitening

5. Appearance of coating film

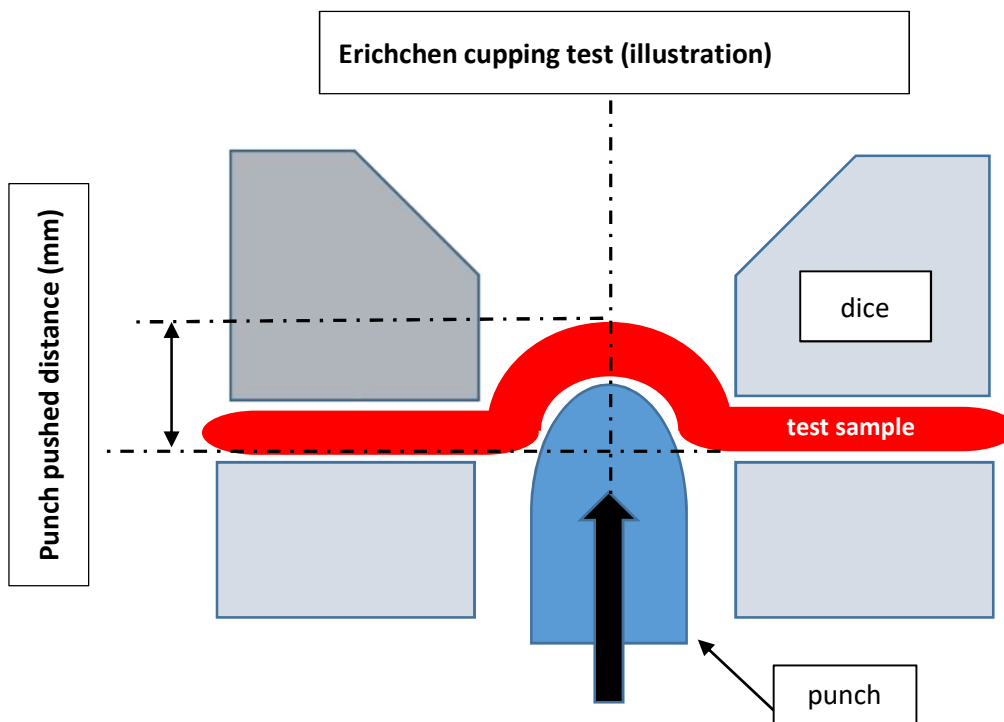
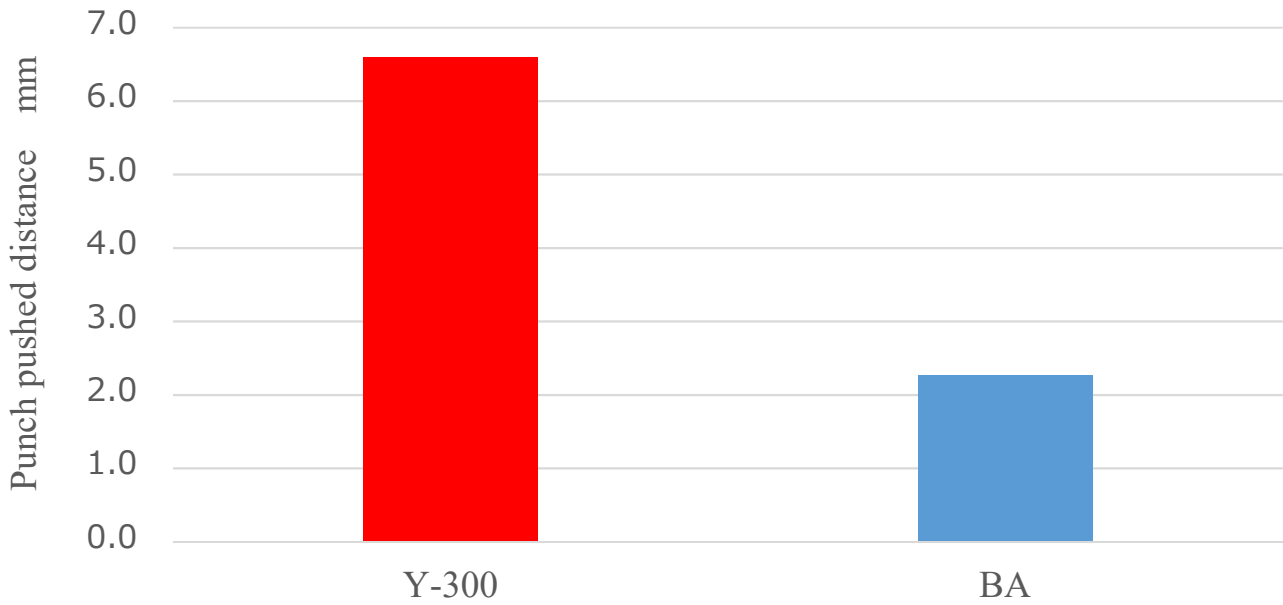
○Excellent transparency, glossiness and level



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6. Erichsen cupping Test

○ Giving great flexibility



7. Salt spray test (crosscut)

○ Suppresses peeling of coating film and progression of rust

Conditions

The First



spray salt
48 Hours
+
wipe off
and leave it
48 Hours



spray salt
48 Hours
+
wipe off
and leave it
48 Hours
+
spray salt
72 Hours



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