Nissin Chemical Industry Co., Ltd.

VINYBLAN 755 TECHNICAL DATA SHEET

Product description

VINYBLAN 755—Vinyl Chloride/Acrylic Aqueous Solution

VINYBLAN 755 is a polymerized vinyl chloride emulsion, based on Nissin's unique technology, that has been developed without using any emulsifier. Used widely as a binder in water based ink.

FEATURES

- Exhibits excellent water resistance .
- Transparent liquid with small particles.
- Is compatible with various additives and solvents.
- Produces a very transparent, water/alcohol resistant film.
- Adheres well to plastic, PVC and PET.

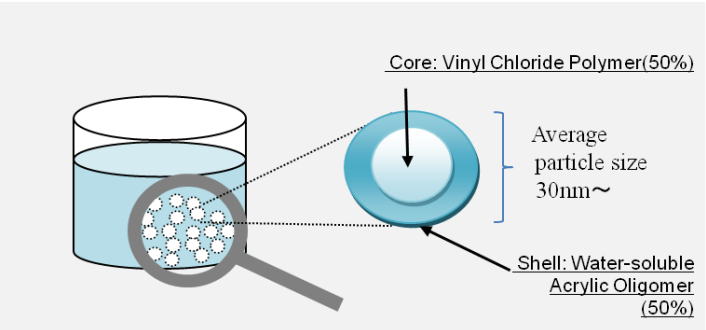
Applications

- Water-borne pigmented ink for ink-jet printer (large size sign/display and textile).
- Water-based flexography/gravure ink binder.
- Industrial ink-jet printing absorbing layer.
- PVC wallpaper ink binder.

Recommendations for Highest Performance

- Add high boiling point solvents (Glycol type) to achieve lower MFT.
- Add alcohol (such as Methanol or IPA) to shorten the drying time.
- Add wetting agent (such as Olfine E-1004) to achieve excellent adhesion to PET or PVC films.
- Add thickening agent to achieve an ideal viscosity range for your usage.
- General Urethan Associative type thickeners (such as ADEKANOL UH-450VF), can be used with Vinyblan.

Chemical Structure of Vinyblan (Schematic)



VINYBLAN 755 General Properties

Grade	755
Appearance	Light yellow
Solid Content (%)	25
Viscosity (mPa·s)	50
PH	7.5
Average Particle Size (nm)	30
Tg (°C)	34
MFT (°C)	12
Acid Value (KOHmg/g)	75
Ionicity	Anion
Machine Stability (*1)	Good
Low Temperature Stability (*2)	Good

(*1) By the Marlon Stability tester.
(*2) No condensation was observed under 5°C
<Note> These values are typical properties and are not intended for use in specifications.

Packaging

- 18kg can; 200kg Drum; 1,000kg Container

Storage Conditions

- Store in cool, dry location and avoid direct sunlight. The desirable temperature range for storage is between 5°C to 30°C.

Shelf Life

- When this product is properly stored in the original unopened container at cool temperature, ranging between 5°C and 30°C, and in a dark location, we certify that every characteristic of this product meets the specifications for 6 months after the shipping date from our factory in Japan.

VINYBLAN 755

Film Performance of VINYBLAN 755
with an Example Formulation

	Acryl Aqueous Solution	755
Abrasion Resistance (*1)	3	5
Abrasion Resistance with Water (*2)	3	5
Abrasion Resistance with Alcohol (*3)	3	5

Formulation

- VINYBLAN (or Acryl) : Wetting agent (Nissin Olfine E-1004) : IPA : Diethylene glycol monobutyl ether = 49.5 : 0.5 : 25 : 25
- Mix in the above order

Specimen Preparation

- Apply VINYBLAN on PET film (TORAY LUMIRROR T60 #188) using Bar Coater No.6 approximately 14 g-wet/m2.
- Dry it under 60°C (735, 737, 745S and 755) or 105°C(743, 745 and 747)

Evaluation Method

- (*1) Rubbing test with gauze (Load: 500g / 50 times repeat)
- (*2) Rubbing test with gauze moistened with ethanol (Load: 500g / 50 times repeat)
- (*3) Rubbing test with gauze moistened with ethanol (Load: 500g / 50 times repeat)

Scoring Criteria

5	No change at all
4	Coating surface is slightly peeled
3	Half of the coating surface is peeled
2	More than half of the coating surface is peeled
1	Most of the coating surface is peeled

Processing Information

- VINYBLAN can be applied in various methods, including spray, gravure, foaming, dipping, and knife coating.
- Recommended drying temperature is 105°C or higher.
- When higher viscosity is needed, thickening agent (urethane associative type or alkali type) can be used.
- To achieve better film formation, we recommend adding glycol type high-boiling point solvents.
- VINYBLAN can be diluted by water.
- VINYBLAN can be mixed with various anionic emulsions.
- VINYBLAN can be mixed with alcohol, such as Methanol or IPA.

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⚠ Caution

- Follow the precautions in the material safety data sheet and technical references.
- VINYBLAN is for industrial use only.
- The data in this document does not include all specifications. Purchasers must conduct tests of their own before putting the product to practical use to verify its compliance, with their intentions for its employment.
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