



HI-THANE™

Innovative polyurethane  
ink binder solutions  
for printing inks

SONGWON is a leading specialist in ink binder technology for gravure and flexography printing inks used in flexible packaging laminates.

Our broad portfolio of HI-THANE™ polyurethanes enables us to design customized printing ink formulations.

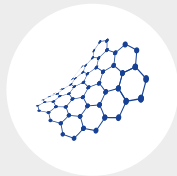
Thanks to their excellent physical and technical properties, HI-THANE™ ink binders are widely used by printing ink manufacturers to produce high-quality print on plastic film packaging.

It's all about **the chemistry™**

 **SONGWON**

# SONGWON – Long-standing expertise in printing ink technology for flexible packaging

## Wide range of ink binders



Suitable for gravure and flexographic printing inks used in plastic film packaging

Cutting-edge quality

EHS standards met

## Comprehensive technical knowhow



Dedicated ink binder testing laboratory in South Korea

Technically advanced, customized printing ink formulations

## Proven reliability



More than 35 years manufacturing experience in South Korea

Backward integration into polyester polyol production

Global sales organization channels in Asia, Europe and North America

## Strong commitment



Continuous innovation to meet new industry standards

HI-THANE™ ink binders are suitable for the formulation of high quality printing inks and generate significant value for printing ink and packaging film producers...

... Their excellent bonding strength on various plastic films, especially PET, nylon and OPP enhances the quality of printed flexible packaging.

... Their outstanding heat resistance allows use in both retortable and non retortable flexible packaging laminates.

... Their low viscosity helps to boost the color strength of printing inks.

... Their excellent anti-blocking properties help to prevent film layers sticking to one another, optimizing productivity.

... Their high re-solubility prevents scale formation in gravure printing cylinder cells, improving print quality and reducing maintenance.

# HI-THANE™ ink binders recommended for gravure and flexographic printing inks

	<b>HI-THANE™ A-890L</b>	<b>HI-THANE™ A-890K</b>	<b>HI-THANE™ A-830</b>	<b>HI-THANE™ A-9301B</b>	<b>HI-THANE™ A-9004HL</b>	<b>HI-THANE™ A-9000</b>
Application	Gravure printing ink	Gravure printing ink	Gravure printing ink	Gravure printing ink	Gravure printing ink	Flexo printing ink
Type	Aliphatic non tin	Aliphatic non tin	Aliphatic non tin	Aliphatic non tin	Aliphatic non tin	Aliphatic non tin
Appearance	Yellowish	Yellowish	Yellowish	Yellowish	Yellowish	Yellowish
Total solid content (% w/w)	30	30	30	30	35	50
Viscosity (25°C, cps)	400 ~ 700	400 ~ 700	500 ~ 800	850 ~ 1500	350 ~ 650	8000 ~ 12000
Solvent	EA/IPA ratio 75/25	EA/IPA ratio 75/25	EA/IPA ratio 88/12	EA/IPA ratio 88/12	EA/IPA ratio 70/30	EA/IPA ratio 84/16

## Key attributes of HI-THANE™ ink binders

	<b>HI-THANE™ A-890L</b>	<b>HI-THANE™ A-890K</b>	<b>HI-THANE™ A-830</b>	<b>HI-THANE™ A-9301B</b>	<b>HI-THANE™ A-9004HL</b>	<b>HI-THANE™ A-9000</b>
Bonding strength	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Suitability for retorting applications	Good	Excellent	Good	Very good	Excellent	Average
Suitability for pigment grinding	Good	Good	Good	Good	Good	Excellent
Color strength	Very good	Very good	Good	Good	Excellent	Excellent
Anti-blocking properties	Good	Good	Very good	Good	Excellent	Average

HI-THANE™ ink binders can be used in combination with the hardener HI-THANE™ CA-40B, especially in white printing ink formulations. The hardener contributes to increase the adhesion of printing inks onto the plastic films after the packaging film lamination process.

### Storage conditions



HI-THANE™ ink binders should be stored indoors, in closed containers, in a dry place at temperatures between 5 and 40°C. Exposure to direct sunlight should be avoided.

### Shelf life



HI-THANE™ products are stable for 6 months, provided they are stored under the above conditions.



For further information, please go to:

**[www.songwon.com](http://www.songwon.com)**

[tpp@songwon.com](mailto:tpp@songwon.com)

SONGWON provides customers with warranties and representations as to the chemical or technical specifications, compositions and/or the suitability for use for any particular purpose exclusively in individual written agreements.

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