



HI-THANE™

Innovative polyurethane
laminating adhesives for
flexible packaging

SONGWON is a leading specialist in laminating adhesive technology for the plastic film packaging industry.

Our extended portfolio of HI-THANE™ polyurethanes enables us to design customized formulations for our customers.

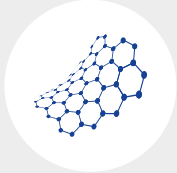
Thanks to their excellent physical and technical properties, HI-THANE™ high performance laminating adhesives are widely used by film converters to improve operational efficiency and profitability.

It's all about **the chemistry™**



SONGWON – Extensive experience in flexible packaging

Wide range of solvent-based laminating systems



Suitable for all flexible packaging applications
Cutting-edge quality
FDA compliant

Comprehensive technical expertise



Dedicated laminating adhesives testing laboratory in South Korea
Customized 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™ laminating adhesives generate significant value for film converters through increased productivity and profitability...

Higher productivity



Fast curing enables high bond strength to be obtained within a few hours, allowing slitting within 12-24 hours and quicker laminate turnover
Long pot life facilitates processing

Increased profitability



High solid content systems reduce solvent disposal costs
Very good wetting properties help to reduce coating weights and film lamination costs
Exceptional film transparency enhances appearance, adding value throughout the chain
Very high resistance to boiling water and retorting prevents de-lamination of film layers and reduces potential waste disposal costs

Technology & compliance



Solvent-based aromatic polyurethanes
Suitable for all flexible packaging applications
FDA compliant

HI-THANE™ laminating adhesives recommended for flexible packaging

	HI-THANE™ A-3165S	HI-THANE™ A-3065	HI-THANE™ A-3070	HI-THANE™ A-4650R	HI-THANE™ A-2050LM	HI-THANE™ A-720M	HI-THANE™ A-7332
A-side chemistry	Polyester based PU	Polyester based PU	Polyester based PU	Polyester based PU	Polyether based PU	Polyether based PU	Isocyanate NCO
Applications	Plastic films Aluminum foil	Plastic films Aluminum foil	Plastic films Aluminum foil	Plastic films Aluminum foil	Plastic films Aluminum foil	Plastic films Aluminum foil	Plastic films Aluminum foil
Type	Solvent-based	Solvent-based	Solvent-based	Solvent-based	Solvent-based	Solvent-based	Non solvent-based
Appearance	Yellowish	Yellowish	Yellowish	Yellowish	Yellowish	Yellowish	Yellowish
Total solid content (% , w/w)	65	65	70	65	70	75	100
Viscosity (Brookfield cps at 25°C)	2000 ~ 4000	2000 ~ 4000	8000 ~ 12000	2000 ~ 5000	2000 ~ 5000	4000 ~ 8000	400 ~ 1000 (at 40°C)
Solvent	Ethyl acetate	Ethyl acetate	Ethyl acetate	Ethyl acetate	Alcohol	Ethyl acetate	Not applicable
Recommended hardeners	HI-THANE™ CA-75	HI-THANE™ CA-75	HI-THANE™ CA-75	HI-THANE™ CA-75	HI-THANE™ CA-100EP	HI-THANE™ CA-295H	HI-THANE™ A-6200
B-side chemistry	Isocyanate NCO	Isocyanate NCO	Isocyanate NCO	Isocyanate NCO	EPOXY	Isocyanate NCO	Polyester based PU

HI-THANE™ adhesives key properties

	HI-THANE™ A-3165S	HI-THANE™ A-3065	HI-THANE™ A-3070	HI-THANE™ A-4650R	HI-THANE™ A-2050LM	HI-THANE™ A-720M	HI-THANE™ A-7332
Grade	General, medium and high performance	General, medium and high performance	General, medium and high performance	Medium and high performance	General performance	General performance	General performance
Film transparency	Good	Good	Good	Good	Good	Very good	Good
Bonding strength	Very good	Good	Good	Very good	Average	Good	Good
Fast cure properties	Good	Good	Good	Good	Good	Very good	Good
Reduced metalized layer transfer	Not applicable	Not applicable	Not applicable	Not applicable	Very good	Not applicable	Very good
Resistance to boiling water and retorting	Good	Good	Good	Very good	Average	Average	Average
Wetting properties	Very good	Very good	Very good	Very good	Very good	Very good	Very good

Storage conditions



HI-THANE™ laminating adhesives should be stored indoors, in closed containers, in a dry place at temperatures between 5 and 40°C.

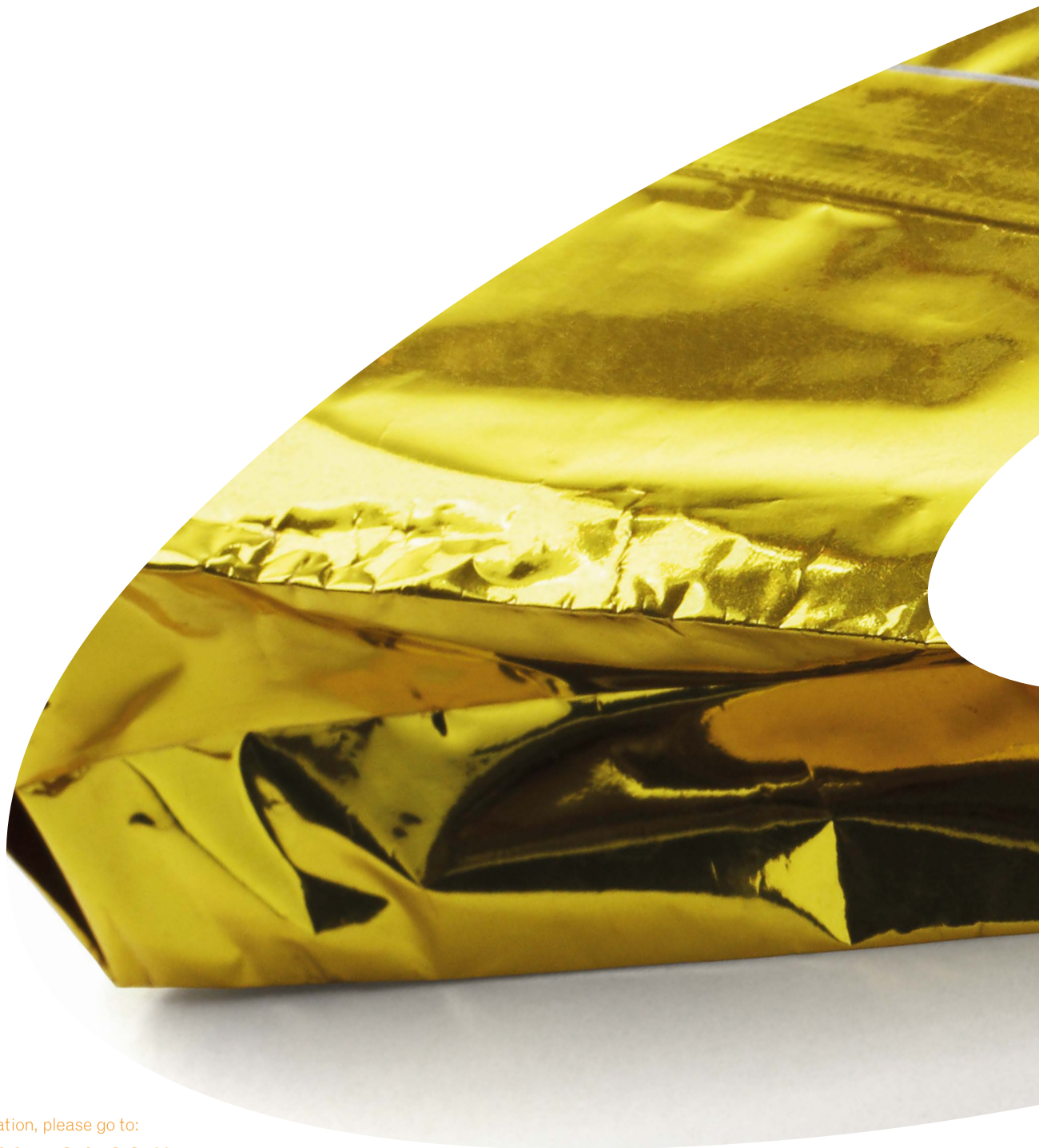
Exposure to direct sunlight should be avoided.

Shelf life



HI-THANE™ laminating adhesives are stable for 12 months, provided they are stored under the above conditions.





For further information, please go to:

www.songwon.com

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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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Version 4, August 2019