

TPP

# Super Absorbent Polymers (SAPs)



A comprehensive range of products that provide comfort and convenience in countless ways

SONGWON offers an extensive range of polymers. "Solution" (thermosetting and/or thermoplastic) polyurethanes (PUs), thermoplastic polyurethanes (TPUs) and polyester diols, based on esterification technology are used in ink binders, adhesives, and other applications requiring solution PUs and TPUs.

Super absorbent polymers (SAPs) are suitable for applications where high water absorbance and excellent stability, regardless of heat and light, is required.

It's all about **the chemistry™**

 **SONGWON**

# Super Absorbent Polymers (SAPs)

Super absorbent polymers (SAPs) can absorb and retain extremely large amounts of a liquid relative to their own mass.

SONGWON Super absorbent polymers exhibit quick, high water absorbency and excellent stability, regardless of heat and light.

SAPs only swell aqueous solutions and does not easily release absorbed liquid, even under pressure.

The SAPs range is suitable for applications such as disposable diapers, incontinence pads and sanitary napkins, as well as water-holding agents for the cable industry, construction, packaging, and more.



# Product range selection guide

Baby diapers  
 Adult diapers  
 Sanitary napkins  
 Incontinence pads  
 Water blocking agents  
 Cold storage agents  
 Calefactory agents  
 Pet sheets  
 Air freshening agents (for hot packs)

Product Code	Product Description	Baby diapers	Adult diapers	Sanitary napkins	Incontinence pads	Water blocking agents	Cold storage agents	Calefactory agents	Pet sheets	Air freshening agents (for hot packs)
HI-SWELL™ HS-700	Fairly small particle size			■		■				■
HI-SWELL™ HS-3500	Very small particle size			■		■				
HI-SWELL™ HS-1000M	Average size, lower hydrolysis						■	■		
HI-SWELL™ HS-770	Fairly large particle size for baby diaper	■								
HI-SWELL™ HS-701S	Fairly high absorbency	■	■		■					
HI-SWELL™ HS-740S	Fairly high absorbency	■	■		■					
HI-SWELL™ HS-1000	General type	■	■							
HI-SWELL™ HS-300L	Fine particle distribution	■	■		■					
HI-SWELL™ HS-740	Fairly high AUL (Absorbency Under Load)	■	■		■					
HI-SWELL™ HS-500	Lower residual monomer content Lower extractability (lower dissolving substance)	■								
HI-SWELL™ HS-1500V	Fairly small size for baby diaper Faster absorbency	■							■	
HI-SWELL™ HS-800	Fairly small particle size for baby diaper Faster absorbency	■								
HI-SWELL™ HS-1000L	Big particle size for special type									■

■ Recommended  
 ■ Suitable

		Moisture Content (%)	Retention Capacity (g/g)	Absorbency (g/g)	Absorbency 1 (g/g) (water)	Absorbency 2 (g/g) (NaCl)	AUL (0.3psi) (cc/g)
<b>HI-SWELL™ HS-700</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 8	> 25	> 40	–	–	> 22
<b>HI-SWELL™ HS-3500</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 8	> 25	> 40	–	–	> 22
<b>HI-SWELL™ HS-1000M</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 15	> 35	–	–	> 18
<b>HI-SWELL™ HS-770</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 33	> 55	–	–	> 26
<b>HI-SWELL™ HS-701S</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 31	> 50	–	–	> 28
<b>HI-SWELL™ HS-740S</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 36	> 65	–	–	> 21
<b>HI-SWELL™ HS-1000</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 33	> 55	–	–	> 26
<b>HI-SWELL™ HS-300L</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 35	> 55	–	–	> 25
<b>HI-SWELL™ HS-740</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 30	> 50	–	–	> 29
<b>HI-SWELL™ HS-500</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 31	> 50	–	–	> 26
<b>HI-SWELL™ HS-1500V</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 33	> 55	–	–	> 26
<b>HI-SWELL™ HS-800</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 6	> 30	> 48	–	–	> 29
<b>HI-SWELL™ HS-1000L</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW		< 12	–	–	150 ± 50	23 ± 7	–

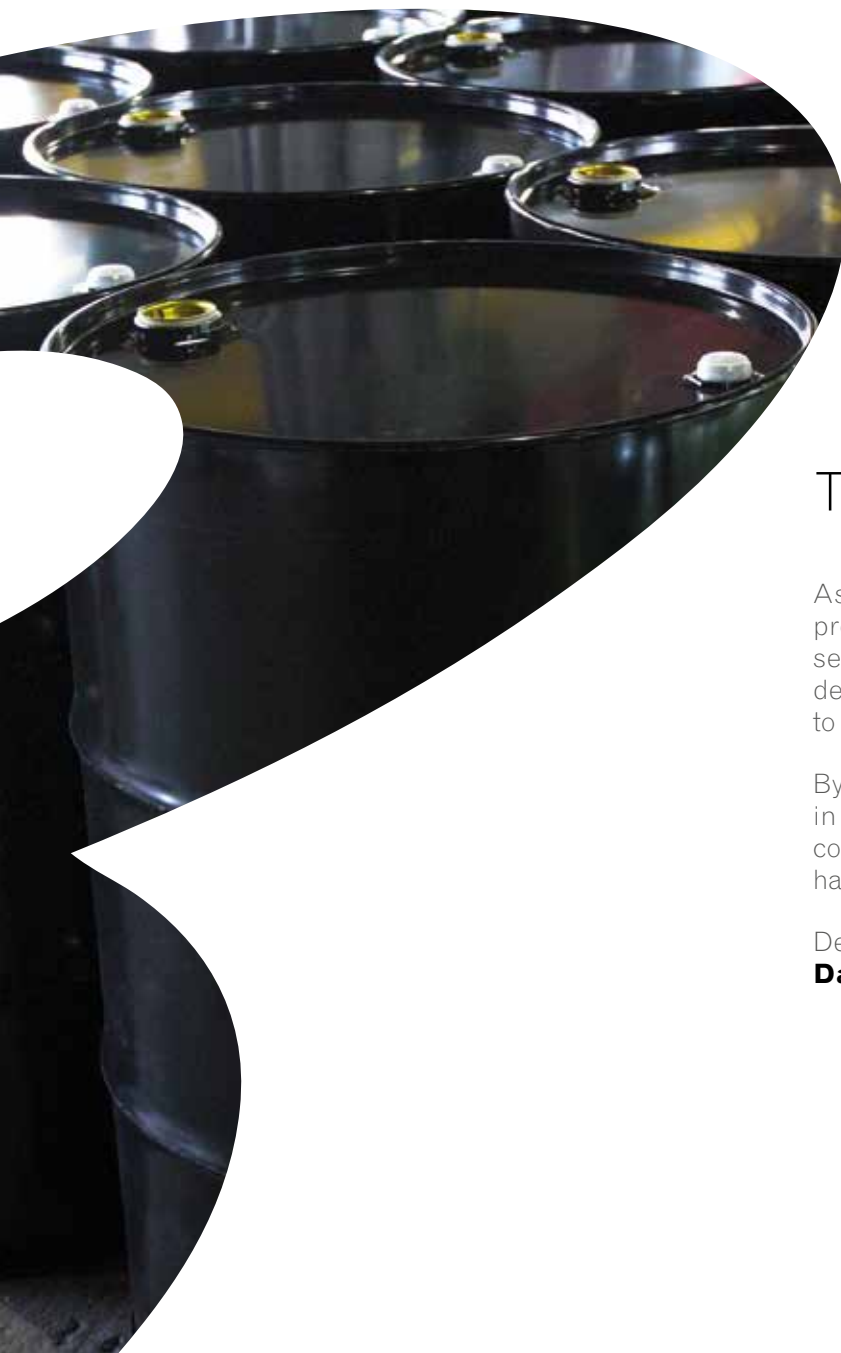
Bulk Density (g/cc)	Flowability (sec)	Residual Monomer (ppm)	Dissolving Substance (%)	Absorbing Speed (sec)	AUL (0.7psi) (cc/g)	Particle Distribution (%)		
0.56 ± 0.05	–	< 300	–	< 20	–	850 µm on < 1 850 ~ 150 µm > 80 150 µm pass < 10		<b>HI-SWELL™ HS-700</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.52 ± 0.05	–	< 300	–	–	–	850 µm on < 1 850 ~ 150 µm < 45 150 µm pass > 40		<b>HI-SWELL™ HS-3500</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.57 ± 0.05	< 25	–	–	–	–	850 µm on < 5 850 ~ 500 µm > 25 500 ~ 150 µm 30 ~ 80 150 µm pass < 7		<b>HI-SWELL™ HS-1000M</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 18	< 60	–	850 µm on < 2 850 ~ 500 µm > 40 500 ~ 150 µm 40 ~ 65 150 µm pass < 5		<b>HI-SWELL™ HS-770</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 15	< 60	–	850 µm on < 2 850 ~ 500 µm > 25 500 ~ 150 µm 50 ~ 75 150 µm pass < 7		<b>HI-SWELL™ HS-701S</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 20	< 60	> 12	850 µm on < 2 850 ~ 500 µm > 30 500 ~ 150 µm 40~70 150 µm pass < 5		<b>HI-SWELL™ HS-740S</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 18	< 60	–	850 µm on < 2 850 ~ 500 µm > 25 500 ~ 150 µm 50 ~ 75 150 µm pass < 7		<b>HI-SWELL™ HS-1000</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 16	< 60	–	850 µm on < 2 850 ~ 500 µm < 35 500 ~ 150 µm 60 ~ 80 150 µm pass < 5		<b>HI-SWELL™ HS-300L</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 16	< 60	> 18	850 µm on < 2 850 ~ 500 µm > 25 500 ~ 150 µm 50~75 150 µm pass < 5		<b>HI-SWELL™ HS-740</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 10	< 60	–	850 µm on < 2 850 ~ 500 µm > 25 500 ~ 150 µm 50 ~ 75 150 µm pass < 7		<b>HI-SWELL™ HS-500</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 18	< 35	–	850 µm on < 2 850 ~ 500 µm < 20 500 ~ 150 µm 70 ~ 90 150 µm pass < 7		<b>HI-SWELL™ HS-1500V</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
0.6 ± 0.05	< 25	< 300	< 10	< 25	–	850 µm on < 2 850 ~ 500 µm < 5 500 ~ 150 µm 80 ~ 99 150 µm pass < 7		<b>HI-SWELL™ HS-800</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW
–	–	–	–	–	–	4,750 µm on < 1 4,750 ~ 850 µm > 94 850 µm pass < 6		<b>HI-SWELL™ HS-1000L</b> Sodium polyacrylate, crosslinked CAS NO. 9003-04-7 PW

# Standard Packaging

- **SAPs:** 20 kg Paper Bag  
700 kg Big Bag  
750 kg Big Bag  
800 kg Big Bag (only for domestic market)

## Key to Abbreviations of Physical Forms

- |                        |                               |                                 |                             |
|------------------------|-------------------------------|---------------------------------|-----------------------------|
| • <b>PW:</b> Powder    | • <b>DW:</b> Dispersion       | • <b>BD:</b> Beads              | • <b>GR:</b> Granule        |
| • <b>SB:</b> Semi Bead | • <b>MB:</b> Micro Beads      | • <b>DF:</b> Dust Free Flow     | • <b>FG:</b> Fine Grind     |
| • <b>SL:</b> Solid     | • <b>FC:</b> Fusion Crystal   | • <b>CP:</b> Crystalline Powder | • <b>VL:</b> Viscous Liquid |
| • <b>FF:</b> Free Flow | • <b>LQ:</b> Liquid or Molten | • <b>PS:</b> Pastilles          |                             |



## Transport and Storage

As a general guideline, we recommend storing the products mentioned in this brochure in their original sealed containers in a cold and dry place. For more detailed information on a specific product, please refer to the corresponding **Technical Data Sheet**.

By law, a number of chemical products must be labeled in respect of transport, storage and handling. Thus corresponding care is a prerequisite for their appropriate handling. Furthermore, local legal regulations may apply.

Detailed information is given in the respective **Safety Data Sheets**.

# About SONGWON Industrial Group

SONGWON, which was founded in 1965 and is headquartered in Ulsan, South Korea, is a leader in the development, production and supply of specialty chemicals.

The second largest manufacturer of polymer stabilizers worldwide, SONGWON operates group companies all over the world, offering the combined benefits of a global framework and readily accessible local organizations.

Dedicated experts work closely together with customers to develop tailor-made solutions that meet individual requirements.

For further information, please go to:  
**[www.songwon.com](http://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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