TPP

PVC Stabilizers and Plasticizers

An extensive range to improve processability and characteristics of PVC products

The third most widely produced synthetic plastic polymer after polyethylene (PP) and polypropylene (PE), polyvinyl chloride (PVC) comes in two basic forms: rigid and flexible. PVC is used in construction applications such as pipes, doors and windows, as well as in the packaging, automotive, household and furniture, and medical sectors. Flexible PVC today often replaces rubber in plumbing, electrical cable insulation, imitation leather, signage and inflatable products.

Mainly used for PVC, plasticizers improve the flexibility and durability of plastic end products. They also act as softeners, extenders and lubricants.

SONGWON offers a comprehensive range of PVC stabilizers and plasticizers. In our PVC application lab in Ulsan, Korea, we support customers with expert formulation and performance evaluations.

Product range selection guide

One Pack Systems (for PVC)

Mixed Metal Stabilizers

	Floorings	Decorative films	Artificial leathers	Wall papers	Sol gel coatings	Flexible extrusion	Electric wires	Food contacts	Rigid films	Pipes	Fittings	Automotives	Window profiles	Catalysts
SONGSTAB™ BP-39AC						■	■	■				■		
SONGSTAB™ BP-49NE						■	■					■		
SONGSTAB™ BP-50NE					■							■		
SONGSTAB™ BP-59NE					■	■						■		
SONGSTAB™ BP-90NE					■	■						■		
SONGSTAB™ BP-878F	■													
SONGSTAB™ SW SERIES										■	■			
SONGSTAB™ WP SERIES													■	
SONGSTAB™ SW-300										■				
SONGSTAB™ WPH-204													■	
SONGSTAB™ BP-337	■													
SONGSTAB™ CZ-67P			■	■										
SONGSTAB™ CZ-71P	■											■		
SONGSTAB™ BZ-73P	■	■										■		
SONGSTAB™ BC-102	■		■		■	■								
SONGSTAB™ BC-530	■	■	■		■	■								
SONGSTAB™ BC-540	■	■	■		■	■								
SONGSTAB™ BZ-150T	■	■	■			■								
SONGSTAB™ BZ-170T	■	■	■			■								
SONGSTAB™ BZ-184T	■	■	■			■								
SONGSTAB™ BZ-153T	■	■	■			■								
SONGSTAB™ BZ-510	■	■	■			■								
SONGSTAB™ BZ-300	■	■	■			■								
SONGSTAB™ BZ-210A	■		■											
SONGSTAB™ BZ-608	■		■		■									
SONGSTAB™ BZ-609	■		■		■									
SONGSTAB™ BZ-700	■		■		■									
SONGSTAB™ BZ-620T	■		■		■									
SONGSTAB™ BZ-119	■		■	■										
SONGSTAB™ BZ-806F	■		■											
SONGSTAB™ BZ-815K	■		■	■										

■ Recommended

■ Suitable

	Floorings	Decorative films	Artificial leathers	Wall papers	Sol gel coatings	Flexible extrusion	Electric wires	Food contacts	Rigid films	Pipes	Fittings	Automotives	Window profiles	Catalysts
SONGSTAB™ BZ-191	■		■	■										
SONGSTAB™ BZ-900P	■		■	■										
SONGSTAB™ CZ-200						■		■						
SONGSTAB™ CZ-400					▪	■		■						
Metal Soap Stabilizers														
SONGSTAB™ SC-110	■	■	■	■	■	■	■	■	■	■	■	■	■	
SONGSTAB™ SC-130	■	■	■	■	■	■	■	■	■	■	■	■	■	
SONGSTAB™ SZ-210	■	■	■	■	■	■	■	■	■	■	■	■	■	
SONGSTAB™ SM-310	■	■	■	■	■	■	■	■	■	■	■	■	■	
SONGSTAB™ SB-410	■	■	■	■	■	■	■		■	■	■	■	■	
SONGSTAB™ BA-ST	■	■	■	■	■	■	■		■	■	■	■	■	
Organo-Tin Stabilizers														
SONGSTAB™ BT-107N									■		▪		■	
SONGSTAB™ BT-711C									■		▪		■	
SONGSTAB™ TM-506									■		▪			
SONGSTAB™ TL-600		■							■					
SONGSTAB™ TM-300P									■		▪			
SONGSTAB™ TM-600P									■		▪			
SONGSTAB™ TM-661P									■					
SONGSTAB™ OT-713R								■	■		▪		■	
SONGSTAB™ TM-710M								■	■		▪		■	
SONGSTAB™ TL-700			■					■	■					
SONGSTAB™ MT-800								■	■		■		■	
SONGSTAB™ MT-800D								■	■		■		■	
SONGSTAB™ MT-830								■			■			

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Auxiliary Stabilizers and Lubricants

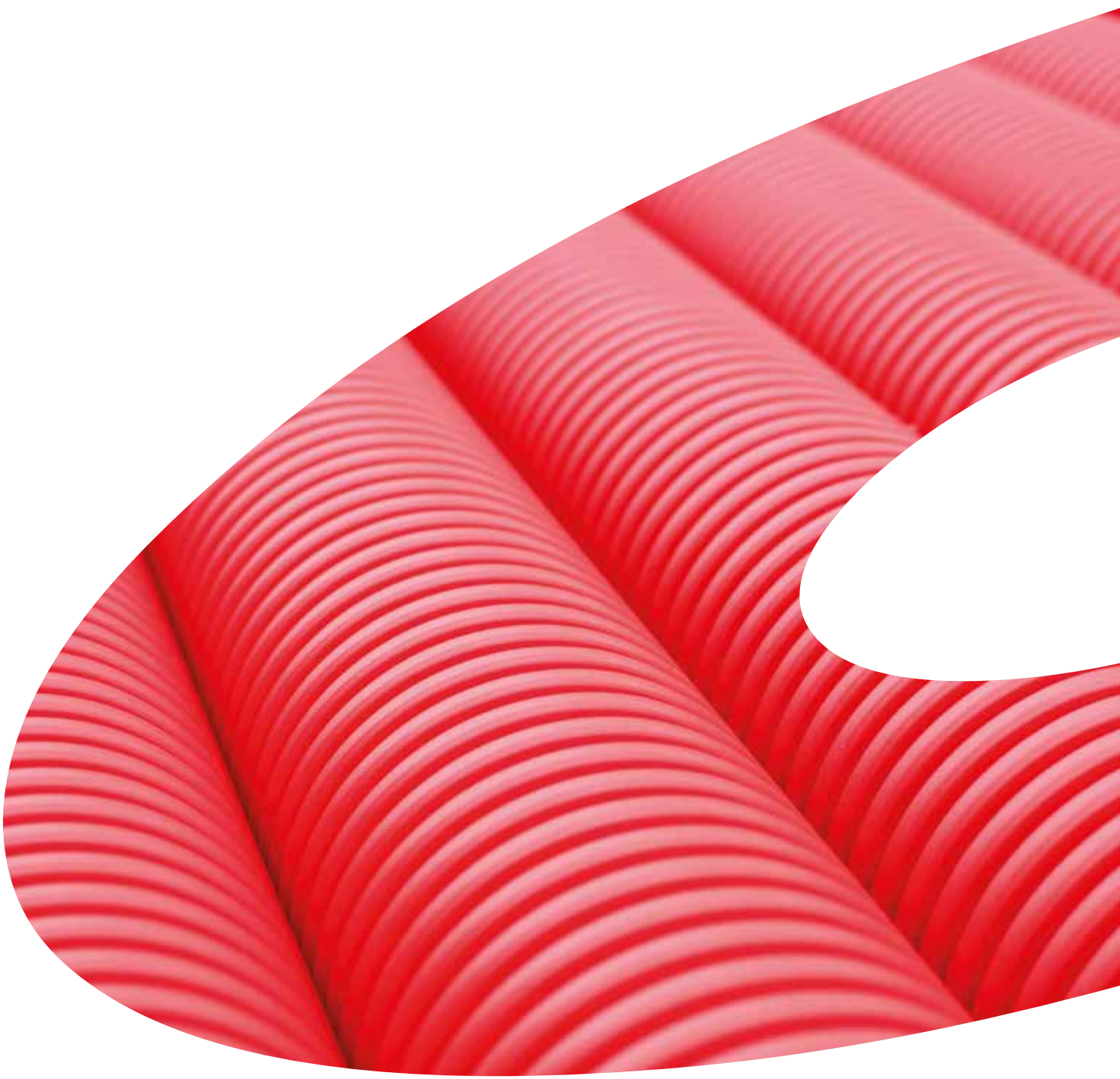
	Floorings	Decorative films	Artificial leathers	Wall papers	Sol gel coatings	Flexible extrusion	Electric wires	Food contacts	Rigid films	Pipes	Fittings	Automotives	Window profiles	Catalysts
SONGSTAB™ PI-311	■	■	■		■	■			■					
SONGSTAB™ E-700	■	■	■	■	■	■	■	■	■					
SONGSTAB™ BS								■	■					
SONGSTAB™ AC-215P	■		■	■										
SONGSTAB™ SL-29		▒						■	■					
SONGSTAB™ SL-31										■	■			
SONGSTAB™ SL-40								■	■					
SONGSTAB™ SL-101								■	■					
SONGSTAB™ BP-251S	■	■	■			■								
SONGSTAB™ BP-252S	■					■								
SONGSTAB™ BP-275S	■	■				■								

Plasticizers

	Hoses	Artificial leathers	Sheets	Electrical wires and cables	Gloves	Films	Wallpaper	Refrigerator sealing strips	Food packaging materials
SONGCIZER™ DOA	■	■	■					■	■
SONGCIZER™ TOTM	■			■					
SONGCIZER™ P-900	■		■	■	■	■		■	
SONGCIZER™ P-1500	■		■	■	■	■		■	
SONGCIZER™ P-2600	■		■	■	■	■		■	
SONGCIZER™ P-2600S	■		■	■	■	■		■	
SONGCIZER™ P-2700	■		■	■	■	■		■	
SONGCIZER™ P-2800	■		■	■	■	■		■	
SONGCIZER™ P-3000	■		■	■	■	■	■	■	

■ Recommended

▒ Suitable



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One Pack Systems (for PVC)

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BP-39AC Complex of Ca-Zn compounds and lubricants PW	5.0 ~ 7.0	• Excellent heat stability and processability • Low odor and volatiles • Semi-rigid or flexible clear extrusion	• Clear electric wires • No toxic transparent hosepipes
SONGSTAB™ BP-49NE Complex of Ca-Zn compounds and lubricants PW	5.0 ~ 7.0	• Excellent heat stability (105°C) and processability • Low odor and volatiles • Semi-rigid or flexible extrusion	• Electric wires • Automotives
SONGSTAB™ BP-50NE Complex of Ca-Zn compounds and lubricants PW	3.0 ~ 7.0	• Excellent heat stability and processability • Low odor and volatiles • Semi-rigid or flexible extrusion	• Gasket for refrigerators
SONGSTAB™ BP-59NE Complex of Ca-Zn compounds and lubricants PW	5.0 ~ 8.0	• Excellent heat stability (105°C) and processability • Low odor and volatiles • Semi-rigid or flexible extrusion	• Electric wires • Automotives
SONGSTAB™ BP-90NE Complex of Ca-Zn compounds and lubricants PW	10.0 ~ 13.0	• Excellent heat stability (125°C) and processability • Low odor and volatiles • Semi-rigid or flexible extrusion • High congo red value	• Electric wires
SONGSTAB™ BP-878F Complex of Ba-Zn compounds and lubricants PW	2.0 ~ 5.0	• Excellent heat stability and processability • Low odor and volatiles • Standard expanded flexible PVC for calendering	• Calender for floorings
SONGSTAB™ SW series Complex of Ca-Zn compounds and lubricants PW	3.0 ~ 7.0	• Excellent heat stability, processability and initial colority • Excellent external lubricant complex • Suitable for standard PVC pipes and fittings	• Pipes • Fittings
SONGSTAB™ WP series Complex of Ca-Zn compounds and lubricants PW	5.0 ~ 7.0	• Excellent heat stability and processability • No heavy metals • Suitable for window profiles	• Window profiles
SONGSTAB™ SW-300 Complex of Ca-Zn compounds and lubricants PW	3.0 ~ 6.0	• Excellent heat stability and processability • No heavy metals	• Standard rigid extrusion
SONGSTAB™ WPH-204 Complex of Ca-Zn compounds and lubricants PW	3.0 ~ 4.0	• Excellent heat stability and processability with tin mercaptides (1.2 ~ 1.7 PHR) • No heavy metals	• Window profiles

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BP-337 Complex of Ba-Zn compounds and lubricants PW	3.0 ~ 6.0	• Excellent heat stability and processability • No heavy metals, no VOCs • Suitable for PVC tiles (high filler)	• Tiles
SONGSTAB™ CZ-67P Complex of Ca-Zn compounds and lubricants PW	1.0 ~ 2.0	• Stabilizer for expanded PVC leather and wall paper of paste resin • Fine uniform cell structure and large blow-ratio even used alone • Low VOC emission	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ CZ-71P Complex of Ca-Zn compounds and lubricants PW	2.0 ~ 4.0	• One pack stabilizer for flexible calendering products • Good synergistic effects when used with epoxy plasticizers • Low VOC emission	• Flexible calendering (PVC opaque tapes)
SONGSTAB™ BZ-73P Complex of Ba-Zn compounds and lubricants PW	1.5 ~ 2.0	• One pack stabilizer for flexible calendering products • Suitable for transparent and opaque film • Low VOC emission, phenol free	• Flexible calendering

Mixed Metal Stabilizers

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BC-102 Complex of Cd-Ba-Zn organics LQ	1.5 ~ 2.5	• Good heat and light stability and excellent clarity • More effective when used with metallic soaps and/or epoxy plasticizers	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BC-530 Complex of Cd-Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer with lubricant • Excellent heat stability, weatherability and processability	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BC-540 Complex of Cd-Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer with lubricant • Excellent heat stability, weatherability and processability • Longterm heat stability better than that of BC-530	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BZ-150T Complex of Ba-Zn organics LQ	1.5 ~ 2.5	• Two package stabilizer for flexible and semi-rigid calendering products • Good transparency when used with BP-251S • With higher filler or TiO_2 loadings, excellent whiteness obtainable when used with BP-252S	• Flexible, semi-rigid calendering and extrusion

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	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BZ-170T Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer for flexible and semi-rigid calendering products • Not required to use with lubricants or metallic soaps • Good synergistic effects when used with epoxy plasticizers • Good heat stability and clarity • Excellent whiteness obtainable when used with BP-275S	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BZ-184T Complex of Ba-Zn organics LQ	3.0 ~ 5.0	• One pack stabilizer for semi-rigid and low plasticized calendering products • Good synergistic effects when used with epoxy plasticizers • Good heat stability and clarity • Excellent whiteness obtainable when used with BP-275S	• Semi-rigid and low plasticized calendering and extrusion
SONGSTAB™ BZ-153T Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer for flexible and semi-rigid calendering products • Not required to use with lubricants or metallic soaps • Good synergistic effects when used with epoxy plasticizers • Good heat stability, clarity, low VOC emission, no phenol • Excellent whiteness obtainable when used with BP-275S	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BZ-510 Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer for semi-rigid and low plasticized calendering products • Good synergistic effects when used with epoxy plasticizers • Good heat stability, clarity, low VOC emission, no phenol • Excellent whiteness obtainable when used with BP-275S	• Semi-rigid and low plasticized calendering and extrusion
SONGSTAB™ BZ-300 Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer for flexible and semi-rigid calendering products • Not required to use with lubricants or metallic soaps • Good synergistic effects when used with epoxy plasticizers • Good heat stability, clarity and low VOC emission • Excellent whiteness obtainable when used with BP-275S	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BZ-210A Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• One pack stabilizer for flexible calendering products • Good synergistic effects when used with epoxy plasticizers • Good clarity and no blooming	• Flexible calendering
SONGSTAB™ BZ-608 Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Doesn't react with a bonding agent • Excellent clarity and color stability • Skin-layer of artificial leather, tarpaulin and slush molding	• Plastisols and tarpaulins

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BZ-609 Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Heat stabilizer for flooring skin layer of paste resin • Excellent clarity and color stability • No reddishness and initial color	• Plastisols (inks, clear top layers)
SONGSTAB™ BZ-700 Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Heat stabilizer for flooring skin layer of paste resin • Excellent clarity and color stability • No reddishness and initial color • Low VOC emission, phenol free, PTBBA free	• Plastisols (inks, clear top layers)
SONGSTAB™ BZ-620T Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Heat stabilizer for flooring skin layer of paste resin • Excellent clarity, color stability and low VOC emission • No reddishness and initial color	• Plastisols (inks, clear top layers)
SONGSTAB™ BZ-119 Complex of K-Zn organics LQ	2.0 ~ 3.0	• Stabilizer for foamed leather and wall paper of paste resin • Fast foaming • Fine uniform cell structure obtained even with higher filler loadings	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ BZ-806F Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Stabilizer for chemically blown PVC foams • Expanded leather with very fine uniform cell structure is obtainable • Good lubricity, no plate-out and no blooming	• Calendering for blow molding (floorings)
SONGSTAB™ BZ-815K Complex of Ba-Zn organics LQ	2.0 ~ 3.0	• Stabilizer for blown wall paper of paste resin • Fine uniform cell structure obtained even with higher filler loadings	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ BZ-191 Complex of K-Zn organics LQ	2.0 ~ 3.0	• Stabilizer for foamed leather and wall paper of paste resin • Fast foaming • Fine uniform cell structure obtained even with higher filler loadings • Low VOC emission	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ BZ-900P Complex of Na-Zn organics LQ	2.0 ~ 3.0	• Stabilizer for foamed leather and wall paper of paste resin • Fast foaming • Fine uniform cell structure obtained even with higher filler loadings • Low VOC emission	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ CZ-200 Complex of Ca-Zn organics LQ	3.0 ~ 4.0	• One pack stabilizer for flexible calendering products • Good transparency and anti-blooming properties • Synergistic effects when used with epoxy plasticizer • Good heat stability	• Flexible calendering (standard films)
SONGSTAB™ CZ-400 Complex of Ca-Zn organics LQ	2.5 ~ 3.5	• One pack stabilizer for flexible calendering products • Good transparency and anti-blooming properties suitable for PVC wraps • Synergistic effects when used with epoxy plasticizer • Good heat stability	• Flexible calendering (wraps, bright films)

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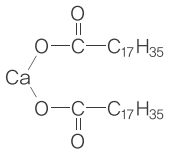
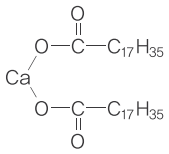
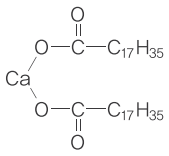
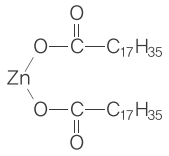
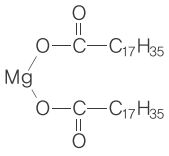
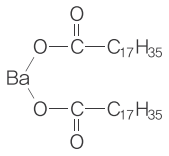
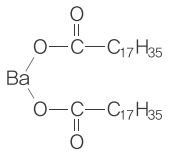
Metal Soap Stabilizers

		Molecular Weight	Melting Range (°C)	Solubility (g/100 g solvent at 25°C)	TGA (°C, % mass loss)
SONGSTAB™ SC-110 Calcium stearate CAS NO. 1592-23-0 PW		572	145.0 ~ 160.0	–	325 5% 415 10% 460 50%
SONGSTAB™ SC-120 Calcium stearate CAS NO. 1592-23-0 PW		572	145.0 ~ 160.0	–	325 5% 415 10% 460 50%
SONGSTAB™ SC-130 Calcium stearate CAS NO. 1592-23-0 PW		572	145.0 ~ 160.0	–	325 5% 415 10% 460 50%
SONGSTAB™ SZ-210 Zinc stearate CAS NO. 557-05-1 CAS NO. 91051-01-3 PW		597	116.0 ~ 125.0	–	335 5% 356 10% 380 50%
SONGSTAB™ SM-310 Magnesium stearate CAS NO. 557-04-0 PW		552	115.0 ~ 145.0	–	335 5% 350 10% 370 50%
SONGSTAB™ SB-410 Barium distearate CAS NO. 6865-35-6 PW		685	–	–	445 5% 460 10% 480 50%
SONGSTAB™ Ba-St Barium stearate CAS NO. 6865-35-6 PW		685	–	–	445 5% 460 10% 480 50%

Organo-Tin Stabilizers

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BT-107N Butyltin mercaptide complex LQ	2.0 ~ 3.0	• Excellent heat stability and clarity • No bleeding even when used for soft products • Excellent resistance to water fogging • No sulfide staining	• Rigid calendering and extrusion
SONGSTAB™ BT-711C Butyltin mercaptide LQ	2.0 ~ 3.0	• Excellent heat stability and clarity • No bleeding even when used for soft products • Excellent resistance to water fogging	• Rigid calendering and extrusion
SONGSTAB™ TM-506 Butyltin maleate ester complex LQ	2.5 ~ 3.5	• Excellent heat stability, weatherability and clarity • Optimum in combination with gelling properties and good lubricity • Suitable for long-time processing at high temperature in TL-600	• Rigid calendering and extrusion
SONGSTAB™ TL-600 Dibutylin laurate complex LQ	0.5 ~ 1.5	• Butyltin laurate complex • Outstanding initial lubricity and weatherability • No bleeding and optimum gelling properties • Initial colorless products are obtainable when used with other organotin, liquid organic stabilizers	• Rigid, flexible calendering and extrusion
SONGSTAB™ TM-300P Dibutyltin 3-mercapto propionate PW	1.0 ~ 2.0	• Excellent initial color in rigid PVC • Excellent heat stability – counteracts lowering of softening point and impact strength of rigid vinyl products • Must not be use with stabilizer containing a Pb or Cd (results in formation of black substance)	• Rigid calendering and extrusion
SONGSTAB™ TM-600P Dibutyltin maleate (polymer) PW	1.0 ~ 2.0	• Polymeric butyltin maleate stabilizer (powder form) • Excellent heat stability, light stability and clarity • Counteracts lowering of softening point and impact strength of rigid vinyl products • Excellent heat stability of PVC-ABS and PVC-NBR polymer blend	• Rigid PVC calendering and extrusion • Flame retardants • ABS, PS etc
SONGSTAB™ TM-661P Dibutyltin maleate complex PW	0.3 ~ 0.6	• Polymeric butyltin maleate stabilizer (powder form) • Excellent heat stability as halogen capture for flame retardant ABS or copolymer of PVC and styrenic resin • Excellent heat stability to PVC-ABS or PVC-NBR polymer blend • Much more cost effective than butyltin maleate polymer	• Flame retardants • ABS, PS etc
SONGSTAB™ OT-713R Octyltin mercaptide LQ	2.0 ~ 3.0	• Not suitable for containers of liquified milk, malt beverages and no alcoholic carbonated beverages • Usable quantity: less than 3 PHR • Little initial color formation • Excellent heat stability and transparency • Good results are obtainable when used with TL-700 or Ca-St or SC-110	• Rigid calendering and extrusion

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	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ TM-710M Dioctyltin maleate ester complex LQ	2.0 ~ 3.0	• Not suitable for containers of liquefied milk, malt beverages, no alcoholic carbonated beverages • Excellent heat stability and weatherability • Higher tin content than TM-700M • Freezing at low temperatures does not affect the properties of this product	• Rigid calendering and extrusion
SONGSTAB™ TL-700 Dioctyltin laurate complex LQ	0.5 ~ 1.5	• Not suitable for containers of liquified milk, malt beverages and no alcoholic carbonated beverages • Usable quantity: less than 2.5 PHR • Excellent lubricity and weatherability • Odorless and no blooming • Initial colorless products are obtainable when used in combination with octyltin mercaptides	• Rigid, flexible calendering and extrusion
SONGSTAB™ MT-800 Mono, Dimethyltin mercaptide complex LQ	1.5 ~ 2.5	• Not suitable for containers of liquefied milk, malt beverages, no alcoholic carbonated beverages • Excellent initial color, heat stability and transparency • Outstanding transparency • Use slightly higher quantity of external lubricant equal to amount of octyltin mercaptide stabilizer	• Rigid calendering and extrusion
SONGSTAB™ MT-800D Dimethyltin mercaptide LQ	1.5 ~ 2.5	• Not suitable for containers of liquefied milk, malt beverages, no alcoholic carbonated beverages • Excellent initial color, heat stability and transparency • Outstanding transparency • Use slightly higher quantity of external lubricant equal to amount of octyltin mercaptide stabilizer	• Rigid calendering and extrusion
SONGSTAB™ MT-830 Mono, Dimethyltin mercaptide and sulfide complex LQ	1.0 ~ 2.0	• Improved version of MT-800 • Great performance effect to the long-term heat-stability • Good heat-stability with smaller amounts • Superior heat-stability ensures remarkably low carbonization during extrusion	• Rigid calendering and extrusion

Auxiliary Stabilizers and Lubricants

	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ Pi-311 Organophosphite compound LQ	0.3 ~ 1.0	• Transparency and color finish are improvable when used with metallic soaps • Good weatherability • Sulfide contamination is preventable • Suitable as antioxidant stabilizer for standard plastics	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ E-700 Epoxidized soybean oil LQ	0.0 ~ 5.0	• No toxic auxiliary stabilizer • Acts synergistically with BZ or CZ stabilizers to increase heat stability • Max. recommended amount 3.0 PHR (risk of bleeding)	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BS Butyl stearate LQ	0.5 ~ 1.5	• Suitable as internal lubricant • Excellent compatibility with metallic soaps and organotin stabilizers • Fast gelling properties	• Calendering and extrusion
SONGSTAB™ AC-215P Acrylic copolymer complex LQ	0.5 ~ 1.5	• Fine uniform cell structure and large blow molding ratio when used with foams kicker (stabilizer) such as BZ-191	• Plastisols for blow molding (artificial leathers, wall papers)
SONGSTAB™ SL-29 Fatty acid ester and wax complex PW	0.3 ~ 1.5	• Excellent external lubricant complex • Good processability for rigid PVC • Rigid calendering for transparent products	• Rigid calendering
SONGSTAB™ SL-31 Fatty acid ester and PE wax complex PW	3.0 ~ 4.0	• Excellent external lubricant complex for CPVC pipes • Good processability for CPVC	• CPVC pipes
SONGSTAB™ SL-40 Fatty acid ester and wax complex PW	0.3 ~ 1.5	• Excellent external lubricant complex • Good processability for rigid PVC • Rigid calendering for transparent products	• Rigid extrusion
SONGSTAB™ SL-101 Fatty acid ester and wax complex PW	0.3 ~ 1.5	• Excellent internal lubricant complex • Good processability for rigid PVC • Rigid calendering and extrusion for transparent products	• Rigid calendering and extrusion

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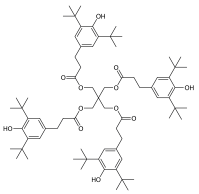
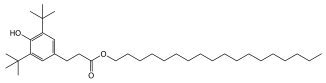
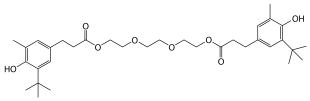
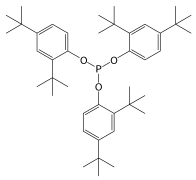
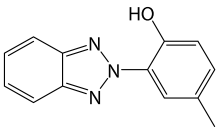
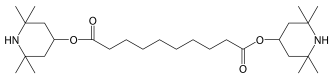
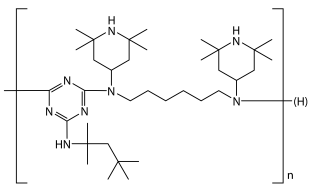
	Dosage (PHR)	Characteristics	Applications
SONGSTAB™ BP-251S Complex of Ba-Zn compounds and lubricants PW	0.3 ~ 1.5	• Excellent lubricity • Excellent compatibility with BZ-150T • Semi-rigid or flexible calendering and extruding for transparent products	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BP-252S Complex of Ba-Zn compounds and lubricants PW	0.3 ~ 0.7	• Excellent lubricity • Excellent compatibility with BZ-150T • Good whiteness obtained when used with TiO_2	• Flexible, semi-rigid calendering and extrusion
SONGSTAB™ BP-275S Complex of Ca-Zn compounds and lubricants PW	0.2 ~ 0.7	• Excellent color resistance • Excellent compatibility with BZ-170T and BZ-177T • Good whiteness obtained when used with TiO_2	• Flexible, semi-rigid calendering and extrusion

Antioxidants and UV Stabilizers for PVC

		Molecular Weight	Melting Range (°C)	Solubility (g/100 g solvent at 25°C)		TGA (°C, % mass loss)	
SONGNOX® 1010 Tetrakis[methylene-3-(3,5-di-tertbutyl-4-hydroxyphenyl) propionate] methane CAS NO. 6683-19-8 PW, FF, DF		1178	110.0 ~ 125.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 < 0.1 < 50.0 < 0.1 48.0 24.2 > 50.0	353 370 425	5% 10% 50%
SONGNOX® 1076 Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate CAS NO. 2082-79-3 PW, CP, SB, LQ		531	50.0 ~ 55.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	0.5 > 50.0 > 50.0 < 0.1 > 50.0 > 50.0 > 50.0	330 347 387	5% 10% 50%
SONGNOX® 2450 Triethylene glycol-bis-3-(3-tert-butyl-4-hydroxy-5-methylphenyl) propionate CAS NO. 36443-68-2 PW, FF, DW		587	76.0 ~ 80.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 < 0.1 > 50.0 9.0 10.0 0.5 > 50.0	326 345 396	5% 10% 50%
SONGNOX® 1680 Tris(2,4-di-tert-butylphenyl) phosphite CAS NO. 31570-04-4 PW, FF		647	181.0 ~ 187.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 10.0 1.3 < 0.1 25.0 24.0 5.0	286 305 362	5% 10% 50%
SONGSORB® 1000 2-(2'-hydroxy-5'-methylphenyl) benzotriazole CAS NO. 2440-22-4 PW		225	128.0 ~ 132.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 < 0.1 3.0 < 0.1 7.1 6.1 5.1	225 242 289	5% 10% 50%
SABO®STAB UV 70 Bis(2,2,6,6-tetramethyl-4-piperidinyl) sebacate CAS NO. 52829-07-9 GR		481	81.0 ~ 85.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 < 0.1 35.0 > 50.0 > 50.0 49.0 38.1	249 264 301	5% 10% 50%
SABO®STAB UV 94 1,6-hexanediamine, N,N'-bis (2,2,6,6-tetramethyl-4-piperidinyl)-, polymer with 2,4,6-trichloro-1,3,5-triazine, reaction products with 2,4,4-trimethyl-2-pentanamine CAS NO. 70624-18-9 Bead		2000 ~ 3100	(Softening) 100.0 ~ 135.0	Squalane n-Hexane Acetone Ethanol Toluene Xylene Ethyl acetate	< 0.05 6.0 > 50.0 < 0.1 > 50.0 > 50.0 > 50.0	403 426 472	5% 10% 50%

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Plasticizers

	Color (APHA)	Acid Value (mgKOH/g)	Heat Loss (125°C 3hours)	Volume Resistivity (30°C)	Refractive Index (25°C)	Viscosity (c p s/25°C)	Features
SONGCIZER™ DOA Di(2-ethylhexyl) adipate CAS NO. 103-23-1 LQ	< 50	< 0.1	< 0.1	> 1×10^{11}	1444 ~ 1450	–	• Cold resistant • Good compatibility
SONGCIZER™ TOTM Tri-2-ethylhexyltrimellitate CAS NO. 3319-31-1 VL	< 120	< 0.2	< 0.1	> 5×10^{11}	1481 ~ 1487	–	• Heat resistant • Low volatility • Migration resistance
SONGCIZER™ P-900 2-ethyl hexyl alcohol CAS NO. 1574656-80-6 VL	< 500	< 3.0	< 0.1	–	–	500 ~1500	• No phthalate • Medium viscosity • Migration resistant
SONGCIZER™ P-1500 Polydi(2-ethylhexyl) glycoladipate CAS NO. 3319-31-1 VL	< 300	< 1.0	< 0.5	–	1454 ~ 1460	100 ~ 200	• No phthalate • Low viscosity
SONGCIZER™ P-2600 Polydi(2-ethylhexyl) glycoladipate CAS NO. 73018-26-5 VL	< 300	< 2.0	< 0.5	–	1462 ~ 1468	2700 ~ 3500	• No phthalate • Medium viscosity
SONGCIZER™ P-2600S 2-ethyl hexyl alcohol CAS NO. 1574656-80-6 VL	< 500	< 3.0	< 0.1	–	–	500 ~ 1500	• No phthalate • Medium viscosity
SONGCIZER™ P-2700 Polydi(2-ethylhexyl) glycoladipate CAS NO. 73018-26-5 VL	< 300	< 2.0	< 0.5	–	1466 ~ 1467	4000 ~ 6000	• No phthalate • High viscosity • Migration resistant
SONGCIZER™ P-2800S Iso-nonyl alcohol CAS NO. 1404200-65-2 VL	< 400	< 2.0	< 0.5	–	1466 ~ 1467	3000 ~ 6500	• No phthalate • High viscosity • Odorless
SONGCIZER™ P-3000 Polydi(2-ethylhexyl) glycoladipate CAS NO. 63149-79-1 VL	< 300	< 2.0	< 0.5	–	1462 ~ 1468	2000 ~ 3200	• No phthalate • Medium viscosity • Migration resistant

Standard Packaging

- **PVC Stabilizers, Liquids:** 200 kg Steel Drum
1000 kg IBC
- **PVC Stabilizers, Solids:** 10 kg Paper Bag
15 kg Paper Bag
20 kg Paper Bag
500 kg Big Bag
- **Organo-tin Stabilizers:** 200 kg Steel Drum
1000 kg IBC
- **Plasticizers, Liquids:** 200 kg Steel Drum
20 MT ISO Tank

Key to Abbreviations of Physical Forms

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

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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.

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tpp@songwon.com

Version 3, April 2017

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