



# PVC Additives

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

| Type                                   |                    | Floorings | Semi-rigid/flexible films | Artificial leathers | Wall papers | Plastisols | Flexible profiles | Wires and cables | Food contacts | Medical | Rigid films | Rigid plates | Pipes | Fittings | Window profiles | Automotive |
|----------------------------------------|--------------------|-----------|---------------------------|---------------------|-------------|------------|-------------------|------------------|---------------|---------|-------------|--------------|-------|----------|-----------------|------------|
| Solid<br>Mixed<br>Metal<br>Stabilizers | SONGSTAB™ CZ-SC305 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC490 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC491 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC590 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC900 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC910 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC920 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SC940 |           |                           |                     |             |            | ■                 | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-S39   |           |                           |                     |             |            | ■                 | ■                | ■             |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-S36   | ■         |                           |                     |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-S303  | ■         |                           |                     |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-S73   | ■         | ■                         |                     |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-S80   | ■         | ■                         |                     |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-SM20  |           |                           |                     |             |            | ■                 |                  | ■             | ■       |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-SM30  |           |                           |                     |             |            | ■                 |                  | ■             | ■       |             |              |       |          |                 |            |
|                                        | SONGSTAB™ CZ-SP180 |           |                           |                     |             |            |                   |                  |               |         |             |              | ■     |          |                 |            |
|                                        | SONGSTAB™ CZ-SP600 |           |                           |                     |             |            |                   |                  |               |         |             |              | ■     |          |                 |            |
|                                        | SONGSTAB™ CZ-SP610 |           |                           |                     |             |            |                   |                  |               |         |             |              | ■     |          |                 |            |
|                                        | SONGSTAB™ CZ-SF670 |           |                           |                     |             |            |                   |                  |               |         |             |              |       | ■        |                 |            |
|                                        | SONGSTAB™ CZ-SS370 |           |                           |                     |             |            |                   |                  |               |         |             | ■            |       |          |                 |            |
|                                        | SONGSTAB™ CZ-SW921 |           |                           |                     |             |            |                   |                  |               |         |             |              |       |          | ■               |            |
|                                        | SONGSTAB™ CZ-SW955 |           |                           |                     |             |            |                   |                  |               |         |             |              |       |          | ■               |            |
|                                        | SONGSTAB™ CZ-SC59  |           |                           | ■                   |             |            |                   | ■                |               |         |             |              |       |          |                 | ■          |
|                                        | SONGSTAB™ CZ-SA10  |           |                           | ■                   |             |            |                   |                  |               |         |             |              |       |          |                 | ■          |
| Kicker                                 | SONGSTAB™ KS-S81   | ■         |                           | ■                   |             |            |                   |                  |               |         |             |              |       |          |                 |            |

# Product range selection guide

| Type                                              |         | Floorings          | Semi-rigid/flexible films | Artificial leathers | Wall papers | Plastisols | Flexible profiles | Wires and cables | Food contacts | Medical | Rigid films | Rigid plates | Pipes | Fittings | Window profiles | Automotive |
|---------------------------------------------------|---------|--------------------|---------------------------|---------------------|-------------|------------|-------------------|------------------|---------------|---------|-------------|--------------|-------|----------|-----------------|------------|
| <b>Liquid<br/>Mixed<br/>Metal<br/>Stabilizers</b> | BaCdZn  | SONGSTAB™ BC-L509  |                           | ■                   |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BC-L528  |                           | ■                   |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BC-L530  |                           | ■                   |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BC-L540  |                           | ■                   |             |            | ■                 |                  |               |         |             |              |       |          |                 |            |
| BaZn                                              |         | SONGSTAB™ BZ-L155  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-L201  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-L219  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-L228  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-L300  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ BZ-L500  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ BZ-L501  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ BZ-L520  | ■                         | ■                   | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ BZ-LP608 | ■                         |                     | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-LP609 | ■                         |                     | ■           |            | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ BZ-LP700 | ■                         |                     | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ BZ-LP701 | ■                         |                     | ■           |            | ■                 |                  |               |         |             |              |       |          |                 | ■          |
|                                                   |         | SONGSTAB™ KS-L806  | ■                         |                     | ■           |            |                   |                  |               |         |             |              |       |          |                 |            |
|                                                   | Kickers | SONGSTAB™ KP-L191  | ■                         |                     | ■           | ■          | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ KP-L900  | ■                         |                     | ■           | ■          | ■                 |                  |               |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ KP-L901  | ■                         |                     | ■           | ■          | ■                 |                  |               |         |             |              |       |          |                 |            |
| CaZn                                              |         | SONGSTAB™ CZ-LF410 |                           | ■                   |             |            | ■                 | ■                | ■             |         |             |              |       |          |                 |            |
|                                                   |         | SONGSTAB™ CZ-LP600 | ■                         | ■                   | ■           | ■          | ■                 |                  |               |         |             |              |       |          |                 |            |



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| Type                          |                               | Floorings         | Semi-rigid/flexible films | Artificial leathers | Wall papers | Plastisols | Flexible profiles | Wires and cables | Food contacts | Medical | Rigid films | Rigid plates | Pipes | Fittings | Window profiles | Automotive |
|-------------------------------|-------------------------------|-------------------|---------------------------|---------------------|-------------|------------|-------------------|------------------|---------------|---------|-------------|--------------|-------|----------|-----------------|------------|
| <b>Organo-Tin Stabilizers</b> | Methylltin                    | SONGSTAB™ MT-800  |                           |                     |             |            |                   |                  | ■             | ■       | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ MT-800D |                           |                     |             |            |                   |                  | ■             | ■       | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ MT-830  |                           |                     |             |            |                   |                  |               |         | ■           |              | ■     | ■        |                 |            |
|                               | Butyltin                      | SONGSTAB™ BT-107N |                           |                     |             |            |                   |                  |               |         | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ BT-711C |                           |                     |             |            |                   |                  |               |         | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ TM-506  |                           |                     |             |            |                   |                  |               |         | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ TM-600P |                           |                     |             |            |                   |                  |               |         | ■           |              | ■     | ■        |                 |            |
|                               | Octyltin                      | SONGSTAB™ OT-713R |                           |                     |             |            |                   |                  | ■             | ■       | ■           |              | ■     | ■        |                 |            |
|                               |                               | SONGSTAB™ TM-710M |                           |                     |             |            |                   |                  | ■             |         | ■           |              | ■     | ■        |                 |            |
| <b>Co-Stabilizers</b>         | SONGSTAB™ SB-S11              | ■                 | ■                         | ■                   |             | ■          |                   |                  |               |         |             |              |       |          |                 | ■          |
|                               | SONGSTAB™ AC-215P             | ■                 |                           | ■                   | ■           | ■          |                   |                  |               |         |             |              |       |          |                 | ■          |
|                               | SONGSTAB™ SB-L102             | ■                 | ■                         | ■                   |             | ■          |                   |                  |               |         |             |              |       |          |                 | ■          |
|                               | SONGSTAB™ PI-311              | ■                 | ■                         | ■                   |             | ■          | ■                 |                  |               |         | ■           |              |       |          |                 |            |
|                               | SONGSTAB™ E-700               | ■                 | ■                         | ■                   | ■           | ■          | ■                 | ■                | ■             | ■       |             |              |       |          |                 | ■          |
| <b>Lubricants</b>             | SONGSTAB™ BS                  |                   |                           |                     |             |            |                   |                  | ■             |         | ■           |              |       |          |                 |            |
|                               | SONGSTAB™ SL-29               |                   | ■                         |                     |             |            |                   |                  | ■             |         | ■           |              |       |          |                 |            |
|                               | SONGSTAB™ SL-31<br>(FOR CPVC) |                   |                           |                     |             |            |                   |                  |               |         |             |              | ■     | ■        |                 |            |
|                               | SONGSTAB™ SL-40               |                   |                           |                     |             |            |                   |                  | ■             |         | ■           |              |       |          |                 |            |
|                               | SONGSTAB™ SL-101              |                   |                           |                     |             |            |                   |                  | ■             |         | ■           |              |       |          |                 |            |

# Product range selection guide

|                                              |                 |
|----------------------------------------------|-----------------|
| <b>Antioxidants<br/>and<br/>UV Absorbers</b> | SONGNOX® 1010   |
|                                              | SONGNOX® 1076   |
|                                              | SONGSORB® 1000  |
|                                              | SONGSORB® 2340  |
|                                              | SONGSORB® 3260  |
|                                              | SONGSORB® 8100  |
|                                              | SABO®STAB UV312 |

|                     |                    | Hose pipes | Artificial leathers | Sheets | Electrical wires<br>and cables | Gloves | Films | Wallpapers | Refrigerator<br>sealing strips | Food packaging<br>materials |
|---------------------|--------------------|------------|---------------------|--------|--------------------------------|--------|-------|------------|--------------------------------|-----------------------------|
| <b>Plasticizers</b> | 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  | ■          |                     | ■      | ■                              | ■      | ■     | ■          | ■                              |                             |



# Application Guide

| Product name        | Type | Product form | Dosage [Phr] | Characteristics                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       | Remarks                                                     |                                                                                     |           |
|---------------------|------|--------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
|                     |      |              |              | Initial color                                                                       | Long-term stability                                                                 | Transparency                                                                        | Plate-out                                                                           | Weatherability                                                                      | Lubricity                                                                            | Low odor                                                                              |                                                             |                                                                                     |           |
| Cables              |      |              |              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                             |                                                                                     |           |
| SONGSTAB™ CZ-SC305  | CaZn | PW           | 3.0 ~ 6.0    |    |    |    |    |    |    |    | 70°C wires & cables                                         |                                                                                     |           |
| SONGSTAB™ CZ-SC490  | CaZn | PW           | 3.0 ~ 6.0    |    |    |    |    |    |    |    | 90/105°C wires & cables<br>Light colored                    |                                                                                     |           |
| SONGSTAB™ CZ-SC491  | CaZn | PW           | 3.0 ~ 6.0    |    |    |    |    |    |    |    | 90/105°C wires & cables<br>Dark colored                     |                                                                                     |           |
| SONGSTAB™ CZ-SC590  | CaZn | PW           | 3.0 ~ 6.0    |    |    |    |    |    |    |    | 90/105°C wires & cables<br>Light colored                    |                                                                                     |           |
| SONGSTAB™ CZ-SC900  | CaZn | PW           | 8.0 ~ 15.0   |    |    |    |    |    |    |    | 105/125°C wires & cables<br>Light colored                   |                                                                                     |           |
| SONGSTAB™ CZ-SC910  | CaZn | PW           | 8.0 ~ 15.0   |    |    |    |    |    |    |    | 105/125°C wires & cables<br>Dark colored                    |                                                                                     |           |
| SONGSTAB™ CZ-SC920  | CaZn | PW           | 8.0 ~ 15.0   |  |  |  |  |  |  |  | 105/125°C wires & cables<br>Light colored                   |                                                                                     |           |
| SONGSTAB™ CZ-SC940  | CaZn | PW           | 8.0 ~ 15.0   |  |  |  |  |  |  |  | 105/125°C wires & cables,<br>insulation tapes               |                                                                                     |           |
| SONGSTAB™ CZ-S39    | CaZn | PW           | 3.0 ~ 6.0    |  |  |  |  |  |  |  | Transparent wires & cables<br>General transparent extrusion |                                                                                     |           |
| Flooring (flexible) |      |              |              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                             |                                                                                     |           |
| SONGSTAB™ CZ-S73    | CaZn | PW           | 1.5 ~ 2.0    |  |  |  |  |  |  |  | Top layer (transparent)                                     |                                                                                     |           |
| SONGSTAB™ CZ-S80    | CaZn | PW           | 1.5 ~ 2.0    |  |  |  |  |  |  |  | Top layer (transparent)                                     |                                                                                     |           |
| SONGSTAB™ KS-S81    | CaZn | PW           | 2.0 ~ 3.0    |  |                                                                                     |  |                                                                                     |                                                                                     |   |  | Foam layer                                                  |                                                                                     |           |
| SONGSTAB™ CZ-S303   | CaZn | PW           | 3.0 ~ 5.0    |  |  |  |  |  |  |  | SPC (stone-plastic composite)                               |                                                                                     |           |
| SONGSTAB™ CZ-S36    | CaZn | PW           | 3.0 ~ 5.0    |  |  |  |  |  |  |  | SPC (stone-plastic composite,<br>high performance)          |                                                                                     |           |
|                     |      |              |              |  | Very good                                                                           |  | Good                                                                                |  | Satisfactory                                                                         |    | Poor                                                        |  | Very poor |

 Very good
  Good
  Satisfactory
  Poor
  Very poor

# Application Guide

| Product name                                        | Type | Product form | Dosage [Phr] | Characteristics |                     |              |             |                |             |             | Remarks                                                                   |
|-----------------------------------------------------|------|--------------|--------------|-----------------|---------------------|--------------|-------------|----------------|-------------|-------------|---------------------------------------------------------------------------|
|                                                     |      |              |              | Initial color   | Long-term stability | Transparency | Plate-out   | Weatherability | Lubricity   | Low odor    |                                                                           |
| Calendering & Extrusion (flexible - solid products) |      |              |              |                 |                     |              |             |                |             |             |                                                                           |
| SONGSTAB™ CZ-S36                                    | CaZn | PW           | 3.0 ~ 5.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flooring<br>Highly filled PVC tiles                                       |
| SONGSTAB™ CZ-S39                                    | CaZn | PW           | 3.0 ~ 6.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Transparent applications                                                  |
| SONGSTAB™ CZ-S73                                    | CaZn | PW           | 1.5 ~ 2.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>Transparent applications                               |
| SONGSTAB™ CZ-S80                                    | CaZn | PW           | 1.5 ~ 2.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>High transparency                                      |
| SONGSTAB™ CZ-SM20                                   | CaZn | PW           | 0.5 ~ 1.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Medical applications<br>Synergetic effect with ESBO                       |
| SONGSTAB™ CZ-SM30                                   | CaZn | PW           | 0.5 ~ 1.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Medical applications<br>Synergetic effect with ESBO<br>Good initial color |

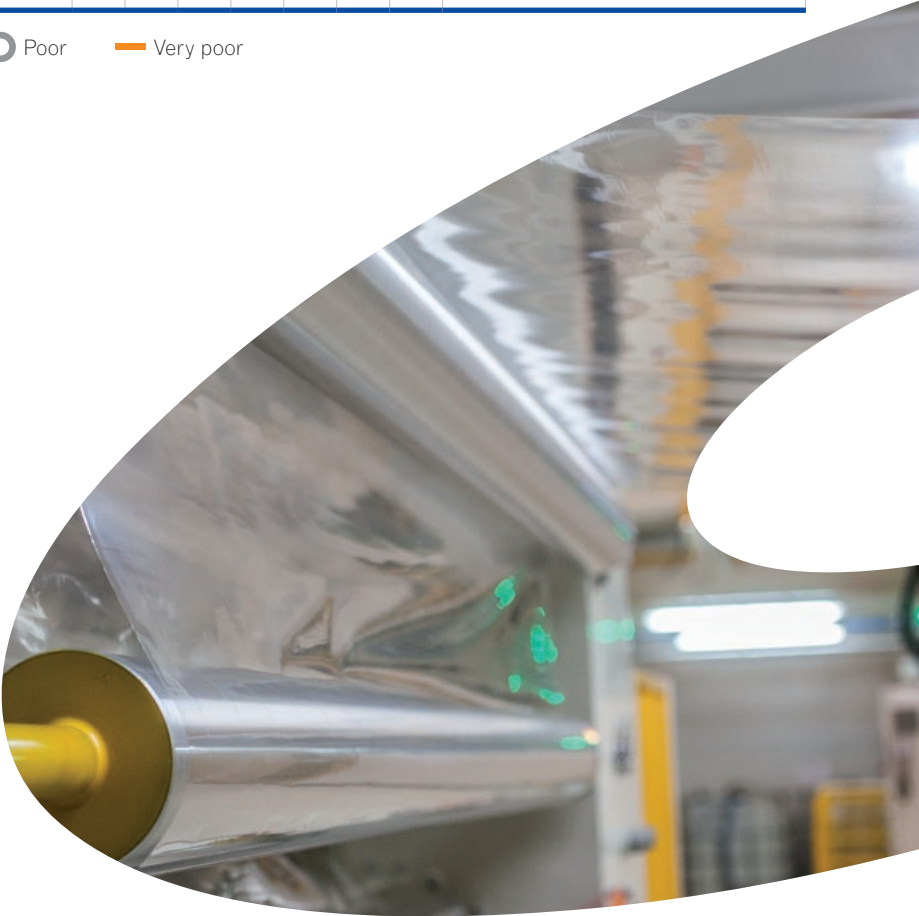
Very good

Good

Satisfactory

Poor

Very poor





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| Product name                                         | Type   | Product form | Dosage [Phr] | Characteristics |                     |              |             |                |             |             | Remarks                                                                                      |
|------------------------------------------------------|--------|--------------|--------------|-----------------|---------------------|--------------|-------------|----------------|-------------|-------------|----------------------------------------------------------------------------------------------|
|                                                      |        |              |              | Initial color   | Long-term stability | Transparency | Plate-out   | Weatherability | Lubricity   | Low odor    |                                                                                              |
| Calendering & Extrusion (flexible – liquid products) |        |              |              |                 |                     |              |             |                |             |             |                                                                                              |
| SONGSTAB™ BC-L509                                    | BaCdZn | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>Transparent                                                               |
| SONGSTAB™ BC-L528                                    | BaCdZn | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>Highly filled / pigmented                                                 |
| SONGSTAB™ BC-L530                                    | BaCdZn | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>High long-term stability                                                  |
| SONGSTAB™ BC-L540                                    | BaCdZn | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose<br>High long-term stability                                                  |
| SONGSTAB™ BZ-L155                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible/semi-rigid film & profile<br>High transparency (glass clear)                        |
| SONGSTAB™ BZ-L201                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible & profile<br>Good price-performance balance<br>Translucent or pigmented application |
| SONGSTAB™ BZ-L219                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible film & profile<br>Highly filled & pigmented                                         |
| SONGSTAB™ BZ-L228                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose                                                                              |
| SONGSTAB™ BZ-L300                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible/semi-rigid film & profile<br>Low VOC generation                                     |
| SONGSTAB™ BZ-L500                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible/semi-rigid film & profiles                                                          |
| SONGSTAB™ BZ-L501                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible/semi-rigid film & profiles                                                          |
| SONGSTAB™ BZ-L520                                    | BaZn   | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Flexible film & profiles                                                                     |
| SONGSTAB™ KS-L806                                    | Kicker | LQ           | 2.0 ~ 4.0    | <div></div>     |                     |              | <div></div> |                | <div></div> | <div></div> | Foam-layer calendering<br>Flooring / artificial leather                                      |
| SONGSTAB™ CZ-LF410                                   | CaZn   | LQ           | 1.5 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Food-wrap film (FDA grade)                                                                   |

Very good

Good

Satisfactory

Poor

Very poor

■ Very good   
 ■ Good   
 ■ Satisfactory   
 ○ Poor   
 ■ Very poor



# Application Guide

| Product name                                                                                                                                                  | Type    | Product form | Dosage [Phr] | Characteristics |                     |              |             |                |             |             | Remarks                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------|--------------|-----------------|---------------------|--------------|-------------|----------------|-------------|-------------|-----------------------------------------------------------------------|
|                                                                                                                                                               |         |              |              | Initial color   | Long-term stability | Transparency | Plate-out   | Weatherability | Lubricity   | Low odor    |                                                                       |
| Plastisol                                                                                                                                                     |         |              |              |                 |                     |              |             |                |             |             |                                                                       |
| SONGSTAB™ BZ-LP608                                                                                                                                            | BaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | General purpose                                                       |
| SONGSTAB™ BZ-LP609                                                                                                                                            | BaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | High performance                                                      |
| SONGSTAB™ BZ-LP700                                                                                                                                            | BaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | General purpose<br>EU REACH compliance<br>Low odor                    |
| SONGSTAB™ BZ-LP701                                                                                                                                            | BaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | General purpose<br>EU REACH compliance                                |
| SONGSTAB™ CZ-LF410                                                                                                                                            | CaZn    | LQ           | 1.5 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | Food grade                                                            |
| SONGSTAB™ CZ-LP600                                                                                                                                            | CaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  |             | <div></div>    |             | <div></div> | EU REACH compliance                                                   |
| Kickers (plastisol)                                                                                                                                           |         |              |              |                 |                     |              |             |                |             |             |                                                                       |
| SONGSTAB™ KP-L191                                                                                                                                             | KZn     | LQ           | 2.0 ~ 4.0    | <div></div>     |                     |              |             |                |             | <div></div> | Foam kicker                                                           |
| SONGSTAB™ KP-L900                                                                                                                                             | NaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     |                     |              |             |                |             | <div></div> | Foam kicker                                                           |
| SONGSTAB™ KP-L901                                                                                                                                             | KZn     | LQ           | 2.0 ~ 4.0    | <div></div>     |                     |              |             |                |             | <div></div> | Fast kicker<br>Good price-performance balance                         |
| Automotive Applications                                                                                                                                       |         |              |              |                 |                     |              |             |                |             |             |                                                                       |
| SONGSTAB™ BZ-L300                                                                                                                                             | BaZn    | LQ           | 2.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Calendering                                                           |
| SONGSTAB™ CZ-SC59                                                                                                                                             | CaZn    | PW           | 1.5 ~ 2.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Artificial leather<br>Semi-rigid & flexible calendering and extrusion |
| SONGSTAB™ CZ-SA10                                                                                                                                             | CaZn    | PW           | 3.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Artificial leather (good long-term heat stability at low temperature) |
| SONGSTAB™ SB-S11                                                                                                                                              | Booster | PW           | 0.2 ~ 1.0    | <div></div>     |                     | <div></div>  | <div></div> | <div></div>    |             | <div></div> | Artificial leather<br>Semi-rigid & flexible calendering and extrusion |
| SONGSTAB™ SB-L102                                                                                                                                             | Booster | LQ           | 0.2 ~ 1.0    | <div></div>     |                     | <div></div>  | <div></div> | <div></div>    |             | <div></div> | Artificial leather (good long-term heat stability)                    |
| <div><div></div> Very good</div> <div><div></div> Good</div> <div><div></div> Satisfactory</div> <div><div></div> Poor</div> <div><div></div> Very poor</div> |         |              |              |                 |                     |              |             |                |             |             |                                                                       |

■ Very good   
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# Application Guide

| Product name                                                                                                                                                  | Type                 | Product form | Dosage [Phr] | Characteristics |                     |              |             |                |             |             | Remarks                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|--------------|-----------------|---------------------|--------------|-------------|----------------|-------------|-------------|-------------------------------------------------------------------------|
|                                                                                                                                                               |                      |              |              | Initial color   | Long-term stability | Transparency | Plate-out   | Weatherability | Lubricity   | Low odor    |                                                                         |
| Pipes & Fittings (rigid)                                                                                                                                      |                      |              |              |                 |                     |              |             |                |             |             |                                                                         |
| SONGSTAB™ CZ-SP180                                                                                                                                            | CaZn                 | PW           | 3.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Pipes, general purpose                                                  |
| SONGSTAB™ CZ-SP600                                                                                                                                            | CaZn                 | PW           | 3.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Pipes, general purpose                                                  |
| SONGSTAB™ CZ-SP610                                                                                                                                            | CaZn                 | PW           | 3.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Pipes, general purpose                                                  |
| SONGSTAB™ CZ-SF670                                                                                                                                            | CaZn/Sn              | PW           | 3.0 ~ 7.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Fittings (CaZn with tin booster)                                        |
| Plates & Sheets (rigid)                                                                                                                                       |                      |              |              |                 |                     |              |             |                |             |             |                                                                         |
| SONGSTAB™ CZ-SS370                                                                                                                                            | CaZn                 | PW           | 3.0 ~ 4.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Rigid foam plates and sheets                                            |
| Window Profiles (rigid)                                                                                                                                       |                      |              |              |                 |                     |              |             |                |             |             |                                                                         |
| SONGSTAB™CZ-SW921                                                                                                                                             | CaZn                 | PW           | 3.0 ~ 5.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Window profiles                                                         |
| SONGSTAB™ CZ-SW955                                                                                                                                            | CaZn                 | PW           | 3.0 ~ 5.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Window profiles                                                         |
| Tin Stabilizers                                                                                                                                               |                      |              |              |                 |                     |              |             |                |             |             |                                                                         |
| SONGSTAB™ MT-800                                                                                                                                              | Methyltin mercaptide | LQ           | 1.5 ~ 2.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose                                                         |
| SONGSTAB™ MT-800D                                                                                                                                             | Methyltin mercaptide | LQ           | 1.5 ~ 2.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Better long-term heat stability                                         |
| SONGSTAB™ MT-830                                                                                                                                              | Methyltin mercaptide | LQ           | 1.0 ~ 2.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Boosted product (high Sn content)                                       |
| SONGSTAB™ BT-107N                                                                                                                                             | Butyltin mercaptide  | LQ           | 2.0 ~ 3.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose                                                         |
| SONGSTAB™ BT-711C                                                                                                                                             | Butyltin mercaptide  | LQ           | 2.0 ~ 3.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose                                                         |
| SONGSTAB™ TM-506                                                                                                                                              | Butyltin carboxylate | LQ           | 2.5 ~ 3.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Good weatherability                                                     |
| SONGSTAB™ TM-600P                                                                                                                                             | Butyltin carboxylate | PW           | 1.0 ~ 2.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | C-PVC application<br>Polymeric tin maleate<br>Smoke suppressant for ABS |
| SONGSTAB™ OT-713R                                                                                                                                             | Octyltin mercaptide  | LQ           | 2.5 ~ 3.5    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | General purpose                                                         |
| SONGSTAB™ TM-710M                                                                                                                                             | Octyltin carboxylate | LQ           | 1.0 ~ 2.0    | <div></div>     | <div></div>         | <div></div>  | <div></div> | <div></div>    | <div></div> | <div></div> | Good weatherability                                                     |
| <div><div></div> Very good</div> <div><div></div> Good</div> <div><div></div> Satisfactory</div> <div><div></div> Poor</div> <div><div></div> Very poor</div> |                      |              |              |                 |                     |              |             |                |             |             |                                                                         |

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# Application Guide

| Product name          | Type              | Product form | Dosage [Phr] | Remarks                                                                                                                                      |
|-----------------------|-------------------|--------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Co-Stabilizers</b> |                   |              |              |                                                                                                                                              |
| SONGSTAB™ SB-L102     | Booster           | LQ           | 0.2 ~ 1.0    | Long-term heat stability at low temperature<br>Amine gas resistance<br>Artificial leather<br>Semi-rigid & flexible calendering and extrusion |
| SONGSTAB™ SB-S11      | Booster           | PW           | 0.2 ~ 1.0    | Long-term heat stability at low temperature<br>Amine gas resistance<br>Artificial leather (good long-term heat stability)                    |
| SONGSTAB™ AC-215P     | Acrylic           | LQ           | 0.5 ~ 2.0    | Cell controller, combination with foam kickers<br>Plastisol (flooring, artificial leather, wall covering)                                    |
| SONGSTAB™ Pi-311      | Phosphite         | LQ           | 0.3 ~ 1.0    | Flexible, semi-rigid calendering and extrusion<br>Plastisol                                                                                  |
| SONGSTAB™ E-700       | ESBO              | LQ           | 0.0 ~ 5.0    | Flexible, semi-rigid calendering and extrusion<br>Plastisol                                                                                  |
| <b>Lubricants</b>     |                   |              |              |                                                                                                                                              |
| SONGSTAB™ BS          | Butyl stearate    | LQ           | 0.5 ~ 1.5    | Internal lubricant<br>Calendering and extrusion                                                                                              |
| SONGSTAB™ SL-29       | Lubricant complex | PW           | 0.3 ~ 1.5    | External lubricant complex<br>Good transparency<br>Rigid calendering                                                                         |
| SONGSTAB™ SL-31       | Lubricant complex | PW           | 2.5 ~ 3.5    | External lubricant complex for C-PVC pipes                                                                                                   |
| SONGSTAB™ SL-40       | Lubricant complex | PW           | 0.3 ~ 1.5    | External lubricant complex<br>Rigid extrusion                                                                                                |
| SONGSTAB™ SL-101      | Lubricant complex | PW           | 0.3 ~ 1.5    | Internal lubricant complex<br>Rigid calendering and extrusion                                                                                |

# Antioxidants and UV Absorbers

|                                                                                                                                         |  | Molecular weight | Melting range (°C) | Solubility (g/100 g solvent at 25°C)                                                                                          | TGA (°C, % mass loss)        |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>SONGNOX® 1010</b><br>Tetrakis[methylene-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate] methane<br>CAS NO. 6683-19-8<br>PW, FF, DF |  | 1178             | 110.0 ~ 125.0      | Squalane < 0.05<br>n-Hexane < 0.1<br>Acetone < 50.0<br>Ethanol < 0.1<br>Toluene 48.0<br>Xylene 24.2<br>Ethyl acetate > 50.0   | 353 5%<br>370 10%<br>425 50% |
| <b>SONGNOX® 1076</b><br>Octadecyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate<br>CAS NO. 2082-79-3<br>PW, CP, SB, LQ               |  | 531              | 50.0 ~ 55.0        | Squalane 0.5<br>n-Hexane > 50.0<br>Acetone > 50.0<br>Ethanol < 0.1<br>Toluene > 50.0<br>Xylene > 50.0<br>Ethyl acetate > 50.0 | 330 5%<br>347 10%<br>387 50% |
| <b>SONGSORB® 1000</b><br>2-(2'-hydroxy-5'-methylphenyl) benzotriazole<br>CAS NO. 2440-22-4<br>PW                                        |  | 225              | 128.0 ~ 132.0      | Squalane < 0.05<br>n-Hexane < 0.1<br>Acetone 3.0<br>Ethanol < 0.1<br>Toluene 7.1<br>Xylene 6.1<br>Ethyl acetate 5.1           | 225 5%<br>242 10%<br>289 50% |
| <b>SONGSORB® 8100</b><br>2-hydroxy-4-n-octoxybenzophenone<br>CAS NO. 1843-05-6<br>PW                                                    |  | 326              | > 47.0             | Squalane 0.3<br>n-Hexane 18.0<br>Acetone > 50.0<br>Ethanol 1.0<br>Toluene > 50.0<br>Xylene > 50.0<br>Ethyl acetate > 50.0     | 280 5%<br>297 10%<br>344 50% |
| <b>SONGSORB® 3260</b><br>2-(2'-hydroxy-3'-tert-butyl-5'-methylphenyl)-5-chlorobenzotriazole<br>CAS NO. 3896-11-5<br>PW                  |  | 316              | 138.0 ~ 141.0      | Squalane 0.7<br>n-Hexane 1.5<br>Acetone 1.5<br>Ethanol 0.1<br>Toluene 10.4<br>Xylene 11.8<br>Ethyl acetate 3.2                | 217 5%<br>232 10%<br>287 50% |
| <b>SONGSORB® 2340</b><br>2-[2-hydroxy-3,5-di(1,1-dimethylbenzyl) phenyl]-2H-benzotriazole<br>CAS NO. 70321-86-7<br>PW, FF               |  | 448              | 137.0 ~ 141.0      | Squalane < 0.05<br>n-Hexane < 0.1<br>Acetone 2.5<br>Ethanol < 0.1<br>Toluene 18.1<br>Xylene 13.1<br>Ethyl acetate 5.1         | 337 5%<br>357 10%<br>409 50% |
| <b>SABO®STAB UV 312</b><br>N-(2-ethoxyphenyl)-N'-(2-ethylphenyl)-oxamide<br>CAS NO. 23949-66-8<br>PW                                    |  | 312              | 124.0 ~ 128.0      | Squalane < 0.05<br>n-Hexane < 0.1<br>Acetone 4.0<br>Ethanol < 0.1<br>Toluene 7.3<br>Xylene 5.2<br>Ethyl acetate 5.0           | 266 5%<br>286 10%<br>333 50% |

# Plasticizers

|                                                                                                                            | Color<br>(APHA) | Acid value<br>(mgKOH/g) | Heat loss<br>(125°C 3hours) | Volume resis-<br>tivity (30°C) | Refractive<br>index (25°C) | Viscosity<br>(c p s/25°C) | Features                                                               |
|----------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------|-----------------------------|--------------------------------|----------------------------|---------------------------|------------------------------------------------------------------------|
| <b>SONGCIZER™ DOA</b><br>Di(2-ethylhexyl) adipate<br>CAS NO. 103-23-1<br>LQ                                                | < 50            | < 0.1                   | < 0.1                       | $> 1 \times 10^{11}$           | 1444 ~ 1450                | —                         | Resistant to cold temperatures<br>Good compatibility<br>Phthalate free |
| <b>SONGCIZER™ TOTM</b><br>Tri-2-ethylhexyltrimellitate<br>CAS NO. 3319-31-1<br>VL                                          | < 120           | < 0.2                   | < 0.1                       | $> 5 \times 10^{11}$           | 1481 ~ 1487                | —                         | Heat resistant<br>Low volatility<br>Migration resistance               |
| <b>SONGCIZER™ P-900</b><br>Poly di(2-ethyl hexyl) 1,4-<br>cyclohexanedimethanol<br>adipate<br>CAS NO. 1574656-80-6<br>VL   | < 500           | < 3.0                   | < 0.1                       | —                              | —                          | 500 ~ 1500                | No phthalate<br>Medium viscosity<br>Migration resistant                |
| <b>SONGCIZER™ P-1500</b><br>Polydi(2-ethylhexyl)<br>glycoladipate<br>CAS NO. 3319-31-1<br>VL                               | < 300           | < 1.0                   | < 0.5                       | —                              | 1454 ~ 1460                | 100 ~ 200                 | No phthalate<br>Low viscosity                                          |
| <b>SONGCIZER™ P-2600</b><br>Polydi(2-ethylhexyl)<br>glycoladipate<br>CAS NO. 73018-26-5<br>VL                              | < 300           | < 2.0                   | < 0.5                       | —                              | 1462 ~ 1468                | 2700 ~ 3500               | No phthalate<br>Medium viscosity                                       |
| <b>SONGCIZER™ P-2600S</b><br>Poly di (2-ethyl hexyl) 1,4<br>cyclohexanedimethanol<br>adipate<br>CAS NO. 1574656-80-6<br>VL | < 500           | < 3.0                   | < 0.1                       | —                              | —                          | 500 ~ 1500                | No phthalate<br>Medium viscosity                                       |
| <b>SONGCIZER™ P-2700</b><br>Polydi(2-ethylhexyl)<br>glycoladipate<br>CAS NO. 73018-26-5<br>VL                              | < 300           | < 2.0                   | < 0.5                       | —                              | 1466 ~ 1467                | 4000 ~ 6000               | No phthalate<br>High viscosity<br>Migration resistant                  |
| <b>SONGCIZER™ P-2800S</b><br>Poly di (Iso-nonyl)<br>glycoladipate<br>CAS NO. 1404200-65-2<br>VL                            | < 400           | < 2.0                   | < 0.5                       | —                              | 1466 ~ 1467                | 3000 ~ 6500               | No phthalate<br>High viscosity<br>Odorless                             |
| <b>SONGCIZER™ P-3000</b><br>Polydi(2-ethylhexyl)<br>glycoladipate<br>CAS NO. 63149-79-1<br>VL                              | < 300           | < 2.0                   | < 0.5                       | —                              | 1462 ~ 1468                | 2000 ~ 3200               | No phthalate<br>Medium viscosity<br>Migration resistant                |

## Standard Packaging

- **PVC Stabilizers, Liquids:** Steel Drum  
IBC
- **PVC Stabilizers, Solids:** Paper Bag  
Big Bag
- **Organo-tin Stabilizers:** Steel Drum  
IBC
- **Plasticizers, Liquids:** Steel Drum  
IBC  
ISO Tank

## Key to Abbreviations of Physical Forms

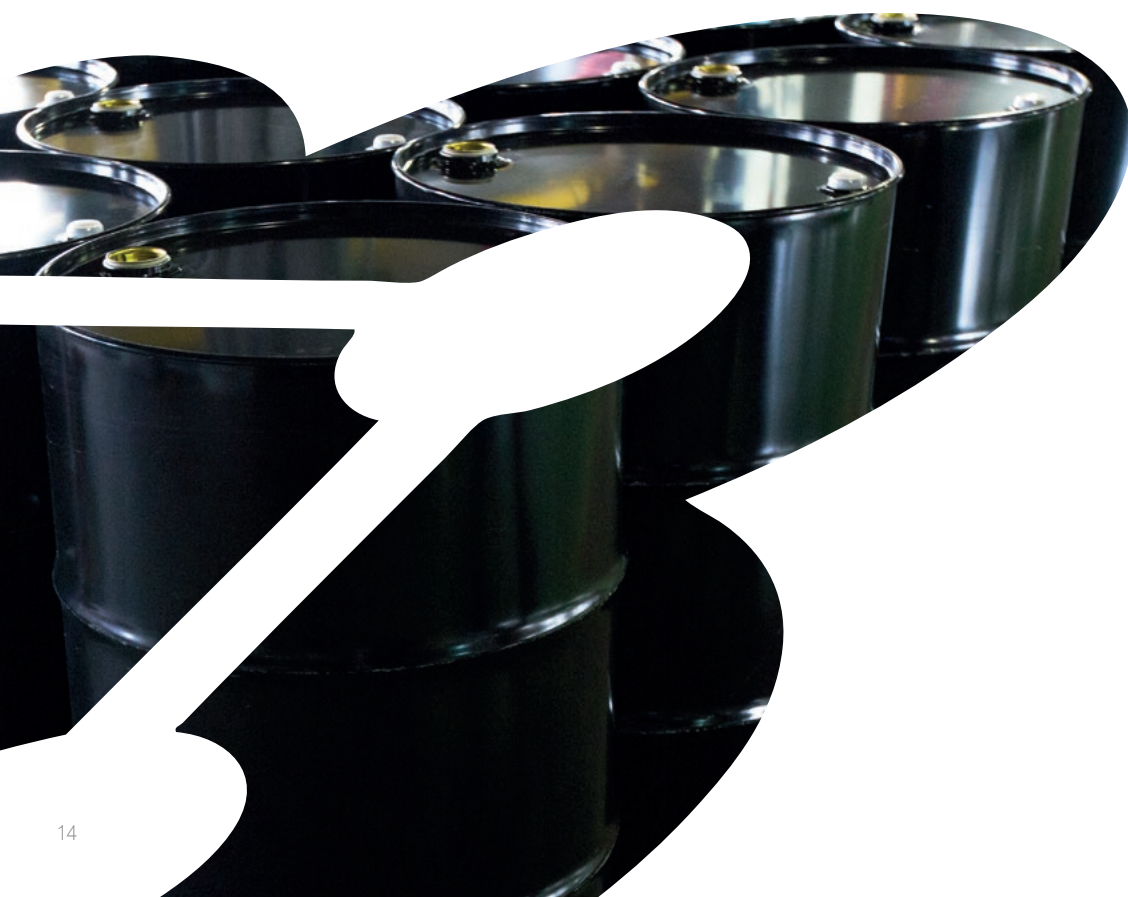
- **PW:** Powder
- **SB:** Semi Bead
- **SL:** Solid
- **FF:** Free Flow
- **DW:** Dispersion
- **MB:** Micro Beads
- **FC:** Fusion Crystal
- **LQ:** Liquid or Molten
- **BD:** Beads
- **DF:** Dust Free Flow
- **CP:** Crystalline Powder
- **PS:** Pastilles
- **GR:** Granule
- **FG:** Fine Grind
- **VL:**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

## 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)**







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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