



SONGSTAB™

Calcium-zinc stabilizers for PVC wire & cable

SONGWON is a leading specialist in heat stabilizers for PVC wire and cable for high-end sheathing and insulation.

To meet both the demanding requirements of the cable industry and today's stringent environment, health and safety (EHS) standards, SONGWON has developed a comprehensive portfolio of solid, high-performance CaZn stabilizers.

SONGSTAB™ CaZn stabilizers are designed to provide a wide range of properties for wires and cables with different temperature ratings.

It's all about **the chemistry™**



Songwon Industrial Co., Ltd.

SONGWON, which is headquartered in Ulsan, South Korea and operates group companies all over the world, has been developing, manufacturing and marketing a wide variety of additives and polymers for more than 55 years.

These include:

- Tin stabilizers (methyl, butyl and octyl + mercaptide and carboxylate)
- Liquid mixed metals BaCdZn, BaZn, CaZn, and kickers
- Solid CaZn stabilizers
- Co-stabilizers
- Plasticizers (DOA, TOTM and polymeric adipates)
- Lubricants and blends
- Antioxidants and UV absorbers
- Tin intermediates

Heat stabilizers for PVC wire and cable

Sensitive applications include electric power and telecommunication transmission as well as many in the automotive sector. Wires and cables for these end uses need to be resistant to extreme heat and widely varying conditions.

SONGWON's portfolio comprises numerous CaZn stabilizers suitable for different wire and cable temperature ratings with diverse characteristics such as initial color, long-term stability, transparency and lubricity.

SONGSTAB™ calcium-zinc stabilizers generate significant value for wire and cable manufacturers

SONGSTAB™ CZ-SC320 was developed to ensure good heat stability and satisfactory water absorption on 70°C wires and cables. It has a shelf life of six months, which is longer than that offered by most competitive products on the market.

SONGSTAB™ CZ-SC490 & SONGSTAB™ CZ-SC900 were formulated to provide good heat stability on wires and cables at 90-105°C and 105-125°C respectively. They combine high Congo red values and excellent electrical properties with low water absorption.

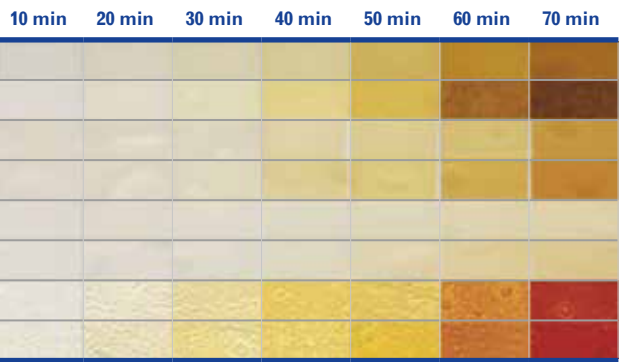
SONGSTAB™ CZ-S39, which is designed for transparent wire and cable applications, offers good heat stability as well as high Congo red values and does not promote copper corrosion.

SONGSTAB™ calcium-zinc stabilizers recommended for PVC wire and cable applications

| | | Formulation | | | | | | Two-roll mill condition | |
|-----------------------|--------------------|-----------------|------------|------------|-------------|---------------|------------------|-------------------------|-------------------|
| | | PVC resin [phr] | TOTM [phr] | DIDP [phr] | CaCO3 [phr] | TiO2(R) [phr] | Stabilizer [phr] | Roll temp. (°C) | Mixing time (min) |
| 70°C PVC cable | SONGSTAB™ CZ-SC320 | 100 | – | 40 | 40 | 0.5 | 5 | 180 | 5 |
| 90/105°C PVC cable | SONGSTAB™ CZ-SC490 | 100 | – | 40 | 40 | 0.5 | 5 | 180 | 5 |
| 105/125°C PVC cable | SONGSTAB™ CZ-SC900 | 100 | 40 | – | 30 | 0.5 | 10 | 180 | 5 |
| Transparent PVC cable | SONGSTAB™ CZ-S39 | 100 | – | 40 | – | – | 5 | 180 | 5 |

Static heat stability (200°C)

| | |
|-----------------------|--------------------|
| 70°C PVC cable | SONGSTAB™ CZ-SC320 |
| | Competitor A |
| 90/105°C PVC cable | SONGSTAB™ CZ-SC490 |
| | Competitor B |
| 105/125°C PVC cable | SONGSTAB™ CZ-SC900 |
| | Competitor C |
| Transparent PVC cable | SONGSTAB™ CZ-S39 |
| | Competitor D |



| | |
|-----------------------|--------------------|
| 70°C PVC cable | SONGSTAB™ CZ-SC320 |
| | Competitor A |
| 90/105°C PVC cable | SONGSTAB™ CZ-SC490 |
| | Competitor B |
| 105/125°C PVC cable | SONGSTAB™ CZ-SC900 |
| | Competitor C |
| Transparent PVC cable | SONGSTAB™ CZ-S39 |
| | Competitor D |

| Congo red (200°C) | Water absorption (70°C x 7 days) |
|-------------------|----------------------------------|
| 39 min | 1.13% |
| 38 min | 1.11% |
| 50 min | 1.04% |
| 49 min | 1.03% |
| 275 min | 0.78% |
| 198 min | 0.80% |
| 79 min | – |
| 68 min | – |

PVC heat stabilizers are just one product that improves the performance of wire and cable. SONGWON uses selected raw materials to develop, manufacture and supply a broad range of effect additives and specialty polymers that give wire and cable producers a competitive edge and help them meet their end-use requirements.

SONGWON's portfolio comprises a variety of stabilizers for different end applications with diverse characteristics. Please contact our Technical Service and Development (TS&D) department for more details and advice on suitable products.





Check out our
official website



Check out our
WeChat account

For further information, please go to:

www.songwon.com

tinpvc@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.

The facts and figures contained herein have been carefully compiled to the best of SONGWON's knowledge but are essentially intended for informational purposes only.

SONGWON Industrial Group does not accept any liability whatsoever for any information, reference or advice provided in this document or any similar SONGWON publication.

Version 4, January 2022