

# PLATINUM.

A globally trusted PVC & CPVC additives manufacturer



## CALCIUM ZINC STABILIZER

### For Wires & Cables

Our Calcium-Zinc (Ca-Zn) stabilizers are non-toxic and designed to minimize heavy metal content in PVC formulations, offering a safer, more environmentally responsible alternative to traditional lead-based stabilizers. Free from hazardous metals, they eliminate health and environmental risks during manufacturing and end-use. These stabilizers deliver excellent thermal stability, processability, and electrical properties, ensuring consistent performance at elevated temperatures.

We offer Ca-Zn stabilizers that comply with global environmental and safety standards, tailored for the wire and cable industry. The range includes grades for service temperatures of 70°C, 90°C, 105°C, and 125°C, ensuring reliable, compliant performance across applications.

Key grades include: **Highstab CPW series - 700, 900, 1050, 1250 ZP** among others.



## Key Features



**Excellent Thermal Stability**



**Enhanced Processing**



**Good Insulation & Volume Resistance (IR, VR)**



**Meets Global Standards**



**Good Initial Color & Color Retention**

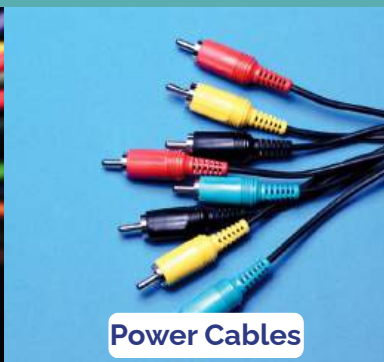


**Meet the requirements of high performance application**

## Applications



Wires



Power Cables



Wires



Datatransmission Cables

## Applications

- Electrical Wires & Cables (Insulation & Sheathing)
- Data Transmission Cables
- Power Cables

## Guideline Formulation

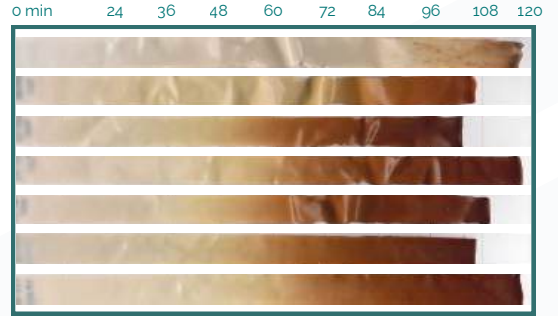
Property	Value (Range)
S-PVC (k=70-72)	100
CaCo3	50
DOP Plasticizer	50
Ca-Zn Stabilizer (Wires & Cables)	4-6

## Congo Red Test (Highstab 700 series)

Dryblend (HighStab 7267p)	Sample wg.	Time	Mins	Normalised
Sample-1	0.058	2:11	130	130
Sample-2	0.059	2:06	126	126
Sample-3	0.057	2:8	123	123
STD	0.058	1:87	120	

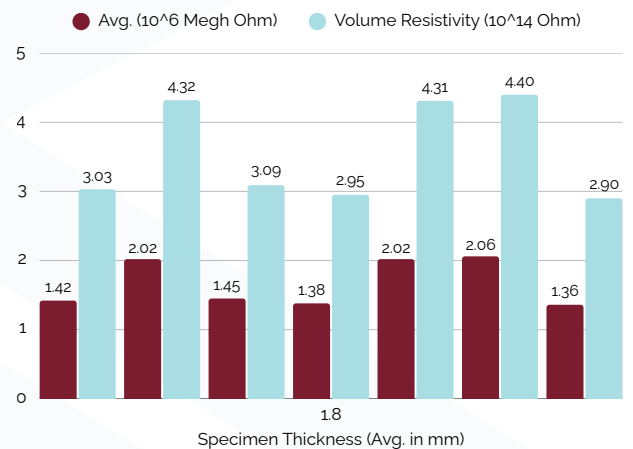
## Stability Test

NLS + TBLS  
(S-074/08-24I)  
(5250/01-25P)  
(5251/01-25P)  
(5252/01-25P)  
(5253/01-25P)  
(5254/01-25P)

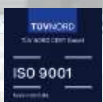


Oven Thermal Stability Test as per our SOP measure the relative heat stability of different formulations or batches and to predict the service performance or processing windows of materials by colour change in specimen. We carried comparable study our Platinum stabilizer of different batches and found comparable to each other

## Volume Resistivity Test



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## CALCIUM ZINC STABILIZER

### For PVC Pipes

Platinum Industries offers non-toxic, high-performance solutions for a wide range of PVC applications. Our stabilizers provide excellent heat stability, color retention, mechanical strength, and compliance with global safety standards. Ideal for uPVC pipe products, they ensure durability while supporting sustainable manufacturing. Backed by innovation and quality, Platinum's Calcium Zinc Stabilizers are trusted across India and the world.

The Platinum Research & Development team has developed innovative products specifically for uPVC pipes in our **HIGHSTAB 400 series**.

## Key Features



**Excellent Thermal Stability**



**Superlative Mechanical Properties**



**Environment friendly & health safety**



**Superior Weatherability & UV Resistance**



**Cost Effective**



**Wider processing window**

## Applications



SWR



Agri



Plumbing

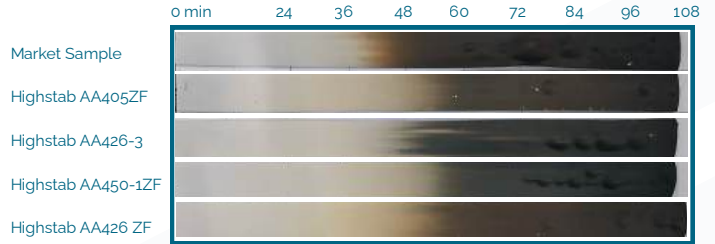


SWR/Agri

## Guideline Formulation - Pipes BIS 4985 (2000)

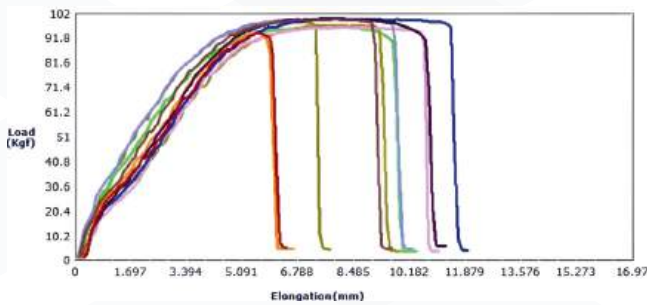
Property	Value (Range)
S-PVC (k = 65)	100
CaCo <sub>3</sub>	6-10
TiO <sub>2</sub>	0.5
PE wax	0.1
Stearic Acid	0.1
Highstab 400 series	2.6-3.2

## Stability Test

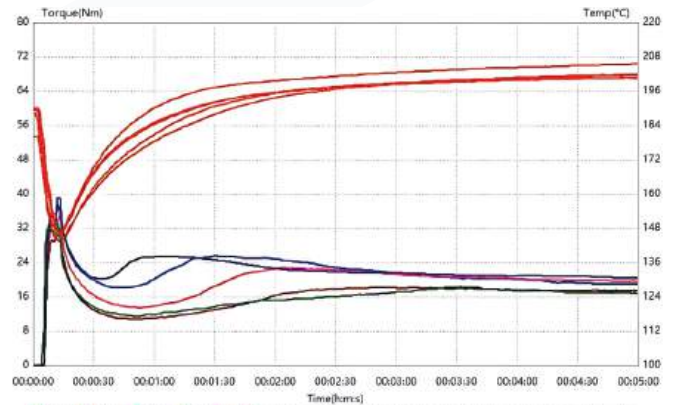


Oven Thermal Stability Test as per our SOP measure the relative heat stability of different formulations or batches and to predict the service performance or processing windows of materials by colour change in specimen. Colour retention time of 400 series Platinum stabilizer is up to 60 min as compared to market sample is 36 min

## Tensile Strength Curve

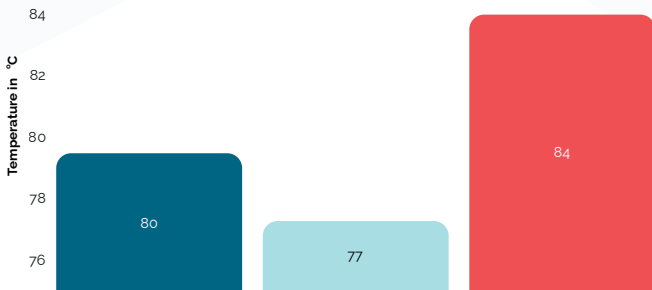


## Rheology Test



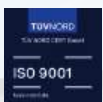
## Vicat Softening Point Test

● Lead Stabilizer ● Tin Stabilizer ● Ca-Zn Stabilizer



Sample	Mass	T1	T2	T3	Tm	Speed
1.2021-213-199 (Market Sample)	68.0 g	190.0 °C	190.3 °C	191.2 °C	180.1 °C	60.0 rpm
2.2021-213-200 (HS AA 405 ZF, B.No. 5693-03-25)	68.0 g	190.1 °C	190.0 °C	190.2 °C	189.8 °C	59.9 rpm
3.2021-213-201 (HS AA 426-3 ZF, B.No. 5995-03-25)	68.0 g	189.8 °C	189.5 °C	189.9 °C	190.1 °C	59.9 rpm
4.2021-213-202 (HS AA 450-1ZF, B.No.6217-3-25)	68.0 g	190.0 °C	189.1 °C	190.2 °C	189.3 °C	59.9 rpm
5.2021-213-203 (HS AA426 ZF, B.No. 5-127-11-24)	68.0 g	190.0 °C	188.0 °C	189.6 °C	188.3 °C	59.9 rpm

	Loading Peak A	Minimum B	Maximum X	End E	Fusion Time(A-X)	Gelation Speed v
1	39.2 Nm	18.1 Nm	25.6 Nm	19.1 Nm	00:01:18	13.1 Nm/min
2	35.6 Nm	13.5 Nm	22.7 Nm	19.6 Nm	00:01:55	13.4 Nm/min
3	31.5 Nm	10.9 Nm	18.3 Nm	17.4 Nm	00:03:18	5.7 Nm/min
4	37.8 Nm	20.1 Nm	25.5 Nm	20.5 Nm	00:00:52	13.7 Nm/min
5	33.3 Nm	11.4 Nm	18.0 Nm	16.9 Nm	00:03:17	3.6 Nm/min



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## CALCIUM ZINC STABILIZER

### For uPVC Fittings (SWR/AGRI/PLUMBING)

We offer non-toxic, high-performance solutions for a wide range of PVC applications. Our stabilizers ensure excellent static & dynamic heat stability, colour retention, mechanical strength, and regulatory compliance with global safety standards. These stabilizers are ideal for products like uPVC fittings for plumbing applications, they deliver durability and clarity while supporting sustainable manufacturing. Backed by innovation and quality consistency, Platinum's Calcium Zinc Stabilizers are trusted across India and the world.

The Platinum Research & Development team has developed innovative products for applications in uPVC fittings. We offer specialized products in our **HIGHSTAB IM 100 series**.

## Key Features



**Excellent Thermal Stability**



**Superlative Mechanical Properties**



**Environment friendly & health safety**



**Superior Weatherability & UV Resistance**



**Cost Effective**



**Wider processing window**

## Applications



SWR



Plumbing

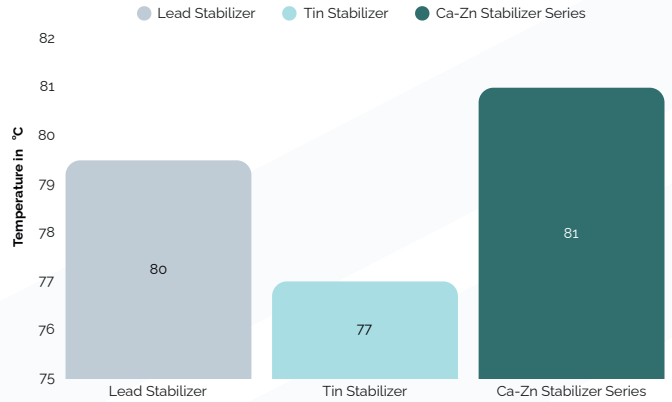


Agri

## Guideline Formulation - Fittings

Property	Value (Range)
PVC resin (K 57)	100
CaCo3	2-5
TiO2	2.7
UM Blue	0.1
Carbon Black	0.009
Highstab IM 100 series	3.5
Oxidised HDPE Waxes	0.7
Calcium Stearate	0.5
Processing Aid	2.0

## Vicat Softening Point Test



## Stress Relief Test

As per BIS standard SWR IS:14735 , Agri IS:7834,

This test need to be done under the following condition

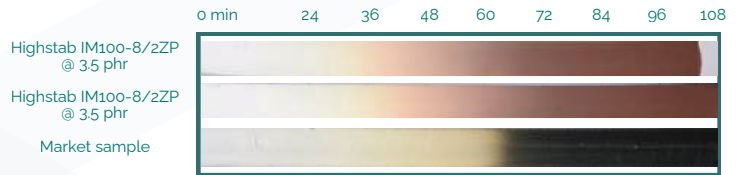
1. Moulded sample kept at 150° C
2. Time - 1 hr
3. No Blistering or cracks on the moulded part



With Platinum Ca-Zn Stab  
SRT Passed

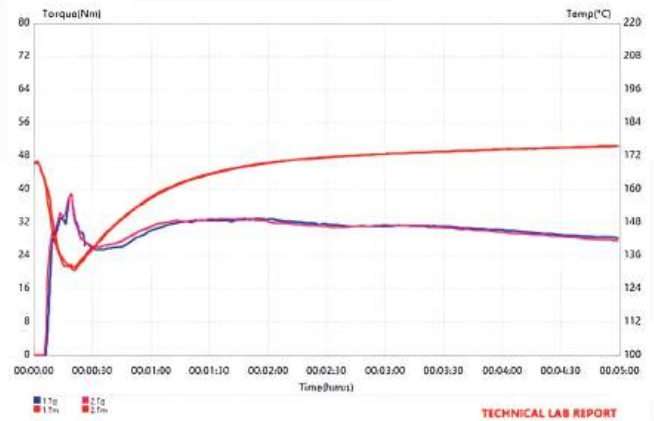
Market Sample  
SRT Failed  
Blistering Formed

## Stability Test



Oven Thermal Stability Test as per our SOP measure the relative heat stability of different formulations or batches and to predict the service performance or processing windows of materials by colour change in specimen. Initial colour stability of Platinum 100 series stabilizer is superior to market sample

## Rheology Test



TECHNICAL LAB REPORT

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## CALCIUM ZINC STABILIZER For Window Profiles

Lead-free heat stabilizer systems are the ideal solution for producing uPVC window and door profiles, offering a sustainable alternative without compromising on quality or performance. They effectively protect the final product from discoloration, brittleness, and loss of mechanical integrity caused by prolonged exposure to sunlight and environmental conditions.

Platinum Industries Ltd. offers solutions for window profile applications, ensuring compliance with environmental standards while delivering high performance and durability. We offer suitable products for Window Profile Applications in our **Highstab WW 800 series**

## Key Features



**Lead-Free Composition**



**Maintains Gloss**



**Excellent Thermal Stability**



**Wider processing window**



**Superior Weather Resistance**



**Safer for human health and the environment**

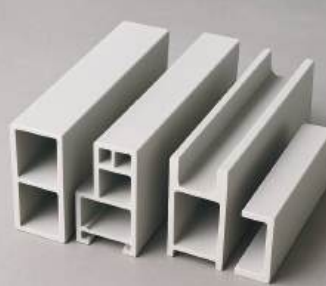
## Applications



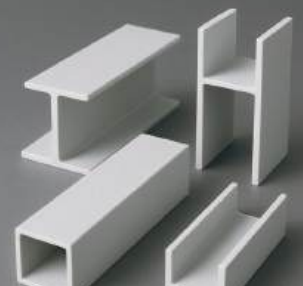
**Window Profile**



**Door Profile**



**Foamed Profiles**

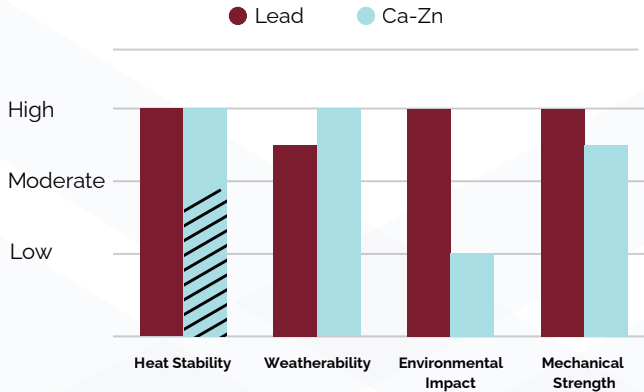


**Structural Profiles**

## Applications

- uPVC Window Profiles
- uPVC Door Frames
- Trims and Structural Profiles
- Foamed Profiles (co-extrusion ready)

## Lead vs Ca-Zn



## Guideline Formulation

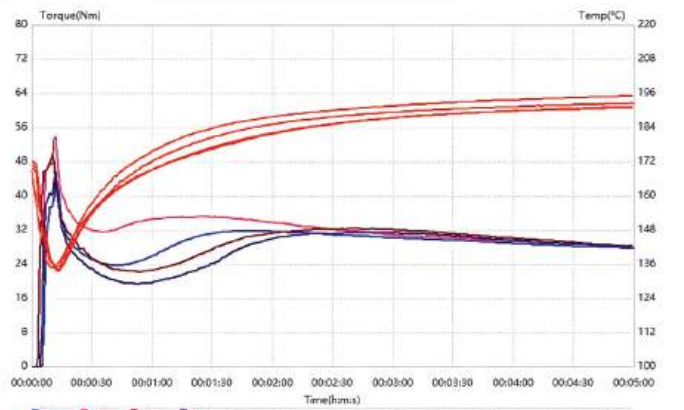
Property	Value (Range)
S-PVC (k = 65)	100
CaCo <sub>3</sub>	10
TiO <sub>2</sub>	7
PE wax	0.36
CPE 135-6 PHR	6
Processing Aid	0.8
Ca-Zn Stabilizer	4.4

## Stability Test



Oven Thermal Stability Test as per our SOP measure the relative heat stability of different formulations or batches and to predict the service performance or processing windows of materials by colour change in specimen. L, a and b value of Platinum stabilizer samples are comparable with market stabilizer samples

## Rheology Test

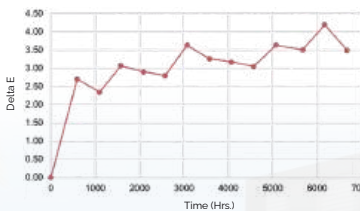


Sample	Mass	T1	T2	T3	Tm	Speed
1.2022-233-25(Market Sample)	68.0 g	169.9 °C	170.2 °C	170.3 °C	171.9 °C	59.9 rpm
2.2022-233-26(HS WW 804-2 ZP S-113-11)	68.0 g	169.9 °C	169.7 °C	170.2 °C	170.8 °C	59.9 rpm
3.2022-233-27(HS CW 810 ZP B.No.S-74-5)	68.0 g	170.0 °C	170.5 °C	170.2 °C	168.8 °C	59.9 rpm
4.2022-233-28(HS CW 810-1ZP B.No.S-148-1)	68.0 g	170.1 °C	170.4 °C	170.3 °C	169.6 °C	59.9 rpm

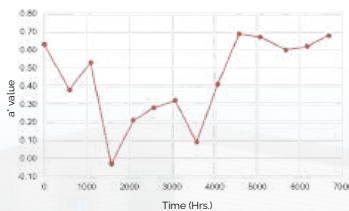
	Loading Peak A	Minimum B	Maximum X	End E	Fusion Time(A-X)	Gelation Speed v
1	44.7 Nm	23.8 Nm	31.8 Nm	12.1 Nm	00:01:34	11.9 Nm/min
2	53.9 Nm	31.6 Nm	35.2 Nm	28.3 Nm	00:01:11	4.6 Nm/min
3	49.9 Nm	22.3 Nm	32.4 Nm	27.9 Nm	00:02:30	10.8 Nm/min
4	45.7 Nm	19.4 Nm	31.4 Nm	27.7 Nm	00:02:29	12.6 Nm/min

## Weatherability Test by Q-SUN Xenon Test Chamber

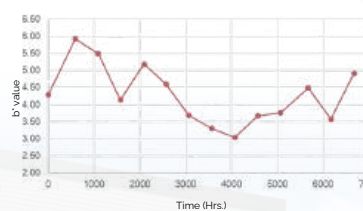
### Delta E



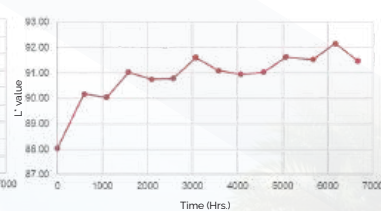
### a\* value



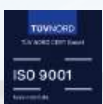
### b\* value



### L\* value



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