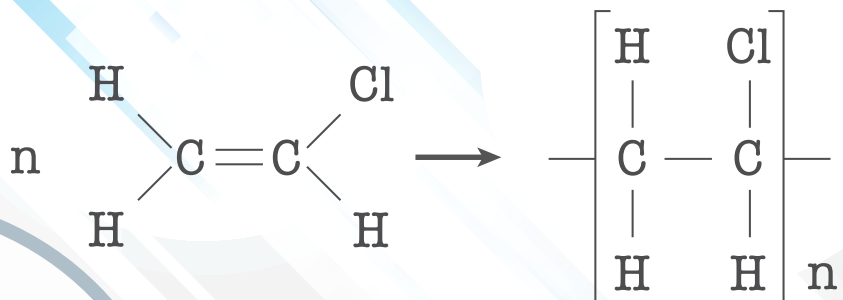


PVC STABILIZERS



PVC Stabilizer

PVC, Polyvinyl chloride, is the world's most versatile plastic and is widely used in profiles, pipes, cables and other plastic articles. Its versatility is due to the many additives can be used with **PVC** to customize the end product. **PVC** can be formulated with the use of additives to be rigid or flexible, opaque or transparent.

PVC degrades to produce **HCl (Hydrochloric acid)** when exposed to heat. **PVC Stabilizers** along with other additives are required to inhibit degradation and allow for seamless processing of **PVC**. The addition of a stabilizer makes the smooth processing of **PVC** based products possible.

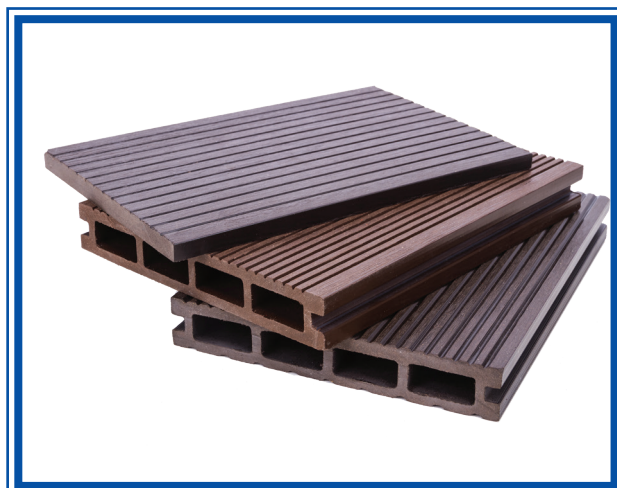
PVC Pipe Formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	150
PVC Stabilizer	5
PE Wax	0.1
ELN-CPE-I35	1
Stearic Acid	0.2
Calcium Stearate	0.3



PVC Wood Composite Formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	100
Micronized Wood Powder	100
PVC Stabilizer	6
PE Wax	0.1
ELN-CPE-I35	1
Stearic Acid	0.2



SINGLE STABILIZER Pb-St

1. Components

Lead Stearate
 $\text{Pb}(\text{C}_{17}\text{H}_{35}\text{COO})_2$
 CAS No : 1072-35-1
 M.W : 774.15

2. Properties

Appearance : White Powder
 Moisture(%) : Max. 0.5
 Free Acid(%) : Max. 1.0
 PbO content(%) : 28.5 ± 1.0
 Melting Point($^{\circ}\text{C}$) : 105 ± 5
 Mesh(#325) : 80.0% up pass
 Impurity : Trace

3. Characteristic & Usages

- * PVC Applications include rigid sheet and pipe as well as sheet
- * Halogen/Acid Scavenger and Lubricant for plastics
- * Excellent synergistic effects when used in combination with Ba-St and Ca-St Stabilizer
- * For additional information please consult the MSDS

4. Physical Form

Powder

5. Packing Unit

20 kg in Paper Bag

SINGLE STABILIZER TLS

1. Components

Tribasic Lead Sulphate
 $3\text{PbO} - \text{PbSO}_4 - \text{H}_2\text{O}$
 CAS No : 12202-17-4
 M.W : 990.8

2. Properties

Appearance : White Powder
 Moisture(%) : Max. 0.5
 Free Acid(%) : Max. 0.5
 ASH(%, 450°C) : 95.0 ± 1.0
 PbO content(%) : 80.0 ± 1.0
 Mesh(#325) : 99.0% up pass
 Impurity : Trace

3. Characteristic & Usages

- * Halogen/Acid Scavenger and Lubricant for plastics
- * Excellent synergistic effects when used in combination with Pb-St and Ca-St Stabilizer
- * For additional information please consult the MSDS

4. Physical Form

Powder

5. Packing Unit

25 kg in Paper Bag or 500 kg in big bag

Cable canal (PVC trunking) formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	125
PVC Stabilizer	4.25
PE Wax	0.5
ELN-CPE-800	1.5
Titanium Dioxide	3

PVC Ceiling Formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	125
PVC Stabilizer	5
PE Wax	0.5
Calcium Stearate	0.3
ELN-CPE-800	1.5
Titanium Dioxide	3.5

PVC Stabilizer for pipe

Raw Materials (Per hundred resin, (phr)	Sewage pipes (Kg)	Sewage pipes (Kg)	High pressure pipes (Kg)
PVC K-65/67	100	100	100
Calcium Carbonate (CaCO ₃)	150	180	35
PVC Stabilizer	4.8 Stab 500	5.25 Stab 500	2.5 Stab 500
Stearic Acid	0.25	0.35	-----
Calcium Stearate	0.3	0.4	0.2
PE Wax	0.25	0.3	0.15



Properties/Grade	Stab 500	Stab 500 E
Application	Sewage Pipe	Sewage Pipe High Pressure pipe Cable canal
Physical form of the product	Flake	Flake
Lead content (%)	24 ± 2	20 ± 2
Color	Cream	Cream
Bulk Density (g/l)	600 ± 30	590 ± 30
Moisture (%)	1.0	1.0
Recommended usage (phr)	2-3	2-4

PVC Window Profile Formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	50
PVC Stabilizer	5
PE Wax	0.1
Acrylic based impact modifier (ELN-AIM-700)	5
Titanium Dioxide (TiO ₂)	5



PVC Fittings formula

Raw materials (phr)	AMOUNT (Kg)
PVC K-58	100
Calcium Carbonate (CaCO ₃)	20
PVC Stabilizer	5-6
PE Wax	0.1
Impact Modifier ELN-IM-I	0.8
Titanium Dioxide (TiO ₂)	0.2
Carbon Black	0.02



SPC Flooring

Formula/ Extruder type	AMOUNT (kg)
PVC K-65/67	100
Calcium Carbonate (CaCO ₃)	300
Recycled PVC	100
PVC Stabilizer (Stab SPC- 23)	7.8
PE Wax	0.9
PA-310 (Acrylic based impact modifier)	2.5
CPE	3.5



Stabilizer for PVC Fittings ♦ 506F

Properties/Grade	Stab / 506F
Application	PVC Fittings
Physical form of the product	Flake
Lead content (%)	42± 2
Color	White
Ash Content (%)	45± 2
Bulk Density (g/l)	600 ± 30
Moisture (%)	1.0 % Max.
Recommended usage (phr)	4-7 phr



Stabilizers for PVC Profile ♦ LW-900P

Properties/Grade	Stab / LW-900P
Application	PVC Profile
Physical form of the product	Flake
Lead content (%)	42 ± 2
Color	Light Blue
Ash Content (%)	45 ± 2
Bulk Density (g/l)	600 ± 30
Moisture (%)	1.5 % Max.
Recommended usage (phr)	4-6



PVC Stabilizers for Cables

Ca/Zn stabilizers are mainly used for **PVC** wire and cable applications. One-pack **Ca/Zn** stabilizers containing calcium/zinc, carboxylate, internal-external lubricants antioxidants and various chemical additives.

Its excellent processing gives good electrical insulation properties and facilitates fusion with improved liquidity during processing to give a glossy and smooth product. It is a highly efficient product with low water absorption, excellent thermal aging characteristics and good mechanical performance.

Application	Product	Formulation				Two roll mill condition	
		PVC Resin (phr)	DINP (phr)	CaCO ³ (phr)	Stabilizer (phr)	Roll temp. (C ^o)	Mixing Time (min)
Cable Insulation	UL 70 Grade NCI10P	100	50	40	6	175	4
	UL 90 Grade CZ107	100	50	40	6	175	4
	UL 105 Grade CZ127	100	50	40	6	175	4
Cable Sheath	CZ 500HQ	100	50	40	6	175	4

Heat Stability Of PVC Stabilizer (205°C)	INT	15 min.	30 min.	45 min.	60 min.	75 min.	90 min.	105 min.
	CZ 107							
CZ 127								
NCI10P								
CZ500HQ								

Congo Red (200°C)

CZ 107	103.8
CZ 127	125.3
NCI10P	81.4
CZ500HQ	48.5

PVC Stabilizers	Formulation				Two roll mill condition	
	PVC Resin (phr)	DINP (phr)	CaCO ₃ (phr)	Stabilizer (phr)	Roll temp. (C°)	Mixing Time (min)
CZ 103	100	50	40	6	175	4
CZ 107	100	50	40	6	175	4
CZ 125	100	50	40	6	175	4
CZ 127	100	50	40	6	175	4
CZ 129	100	50	40	6	175	4

Heat Stability of PVC Stabilizer (205°C)	INT	15 min.	30 min.	45 min.	60 min.	75 min.	90 min.	105 min.
	CZ-103							
CZ-107								
CZ-125								
CZ-127								
CZ-129								

Congo Red (200°C)

CZ-103	91.5
CZ-107	104.3
CZ-125	104.8
CZ-127	121.4
CZ-129	160

PVC STABILIZERS

PB Based Stabilizers

Usage	Series	Typical Grade	Appearance	Characteristics			
Cable	KN	KN-900V	Powder Granule Bead	Excellent heat stability & electrical resistance			
		KN-500		High lubricity / High productivity			
Pipe	KN	KN-506F		Powder Granule Bead	Excellent heat stability		
		LF-930P2					
Fitting	LW	LW-900P			Powder Granule Bead	Excellent weather ability / High glossy / High heat stability	
	KD	KD-300M				Excellent heat stability / Good processing ability	
Window Profile	DS	DS-352A				Powder Granule Bead	Good initial color stability & processing ability
General Profile	NP	NP-I					Good heat stability & processing ability
Tile							
Hose							

Ca-Zn Based Stabilizers

Usage	Series	Typical Grade	Appearance	Characteristics		
Cable	NC	NC-300P	Powder	Excellent heat stability & electrical resistance		
	CZ	CZ-I27				
Pipe	NP	NP-200P		Powder	Excellent dynamic heat stability / High productivity / Good mechanical properties	
		KD-I05EI			Good foaming & mechanical properties	
Foam pipe	NF	NF-I00			Powder	Excellent heat stability / Good processing ability / Good metal release properties
Fitting	NW	NW-600P				Excellent weather resistance / High glossy / Optimum lubricity / Excellent static & dynamic heat stability
	NH	NH-350P				Excellent heat stability / Good processing ability
Window profile	CS	CZ-20I				Powder
General profile	DS	DS-356	Good initial color stability, Ba/Zn system			
Hose						
Tile						

PVC Stabilizer for pipes and ceiling panels

PVC Stabilizers	Formulation				Two roll mill condition	
	PVC Resin (phr)	PIGMENT (phr)	CaCO ₃ (phr)	Stabilizer (phr)	Roll temp. (C°)	Mixing Time (min)
KN500E	100	1	5	2,5	175	5
KN500	100	1	5	2,5	175	5
KN500S	100	1	5	2,5	175	5
KN500R	100	1	5	2,5	175	5

Heat Stability of PVC Stabilizer (185°C)	INT	15 min.	30 min.	45 min.	60 min.	75 min.	90 min.
KN500E							
KN500							
KN500S							
KN500R							



