



# NIC GmbH

# PVC

<b>PVC / Suspension</b>	S5831	S6031	S6532	S6542	S6732	S7042	S7242	S8040
<b>PVC / Emulsion</b>	E60	E6644	E6834	E7244	E7544	-	-	-



## SPVC S5831

*Poly (vinyl chloride) (Suspension)*

### Product Description:

It is manufactured by suspension polymerization. PVC S58 has following properties that make it suitable for rigid PVC applications:

- Low content of fines (Easy handling and conveying)
- Narrow particle size distribution (Easy processing)
- Moderate melt viscosity (Easy processing even in injection molding)
- High tensile properties (Good end product performance)

### Processing & Applications:

PVC S58 is designed to give an easy processing product for rigid applications since it has low melt viscosity. It is mainly designed for injection molding and thin wall extrusion products but can be easily used for other applications such as foamed rigid sheets....

- Injection molding: Rigid articles like pipe fittings
- Extrusion: Rigid compact and foamed sheets and films
- Calendaring: Rigid sheets and films

### Typical Data:

TYPICAL TEST	Unit	SPECIFICATION	Test method
K-Value	-	58±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	540~600	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	14~20	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### Packaging, Delivery and Storage:

PVC S58 is delivered in 25 kg bags. PVC resin should be stored in a manner to prevent a direct exposure to sunlight. The storage area should also be dry and preferably don't exceed 50°C. NIC GmbH would not give warranty to bad storage conditions which may lead to quality deterioration such as color change and inadequate product performance./Jumbo Bag/Bunker.



## SPVC S6031

*Poly(vinyl chloride) (Suspension)*

### Product Description:

Pvc S60 is a free-flowing suspension polymer with excellent fusion properties. It is recommended for sheet, profile and film manufacturing.

### Applications:

Pvc s60 can be converted into free flowing mixtures using common PVC stabilizer and lubrica blends.

In suitable formulations, finished parts made of pvc s6031 show the following properties:

- High transparency
- Low fish-eye count
- Low water uptake

Pvc s60 is used in a variety of applications and processes:

- Oriented and unoriented rigid film produced on calendars' and extruders
- Extruded and compression-moulded sheets
- Rigid profiles
- Sheets and profiles produced by Celuka or free-foaming processes.

pvc S 60 may also be converted into finished articles and blow mouldings on standard injection moulding equipment.

### Typical Data:

TYPICAL TEST	Unit	SPECIFICATION	Test method
K-Value	-	60±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	520~580	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	16~22	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### Processing:

Pvc s60 can be converted into free flowing mixtures using common PVC stabilizer and lubricant blends.

### Packaging, Delivery and Storage:

The product is supplied in 25-kg bags as well as in bulk form.

PVC S 60 should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing./ Jumbo Bag/Bunker



## SPVC S6532

*Poly(vinyl chloride) (Suspension)*

### **Product Description:**

PVC S 65 is a porous suspension polymer with high bulk density. It is recommended for rigid profile, sheet and pipe extrusion.

### **Applications:**

PVC S65 can be converted into molding compounds with the usual additives by standard mixing techniques.

Mixtures containing PVC S65 fuse rapidly and can be extruded at high output rates.

Principal application areas are:

- Rigid profiles
- Sheets
- Pipes

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	65±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	550~610	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~5	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	19~25	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing./ Jumbo Bag/Bunker.



## SPVC S6542

*Poly(vinyl chloride) (Suspension)*

### **Product Description & Applications:**

K-value 65, standard grade for semi-rigid and plasticized profiles, films, and flexible articles.

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	65±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	460~520	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	24~30	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing./ Jumbo Bag/Bunker.



## SPVC S6732

*Poly(vinyl chloride) (Suspension)*

### **Product Description:**

PVC S67 is designed to give an easy processing product for rigid extrusion applications. It is manufactured by suspension polymerization.

PVC S67 has following properties that make it suitable for rigid PVC extrusion with high Production rates:

- Very low dust-level ( Easy handling and conveying)
- High bulk density (Good material compaction and high production rates)
- Narrow particle size distribution (Easy processing)
- High melt strength (Good for fast processes like pipe and profile extrusions)
- High tensile properties (Good end product performance)

### **Applications:**

PVC S67 is designed to give an easy processing product for extrusion rigid applications since it has moderate melt viscosity with high melt strength. It is mainly designed for pipe and profile products.

- Rigid pipes (Pressure and non-pressure)
- Corrugated tubes and conduits
- Rigid profiles

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	67±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	550~610	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~5	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	18~24	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### **Packaging, Delivery and Storage:**

PVC S67 is delivered in 25 kg bags. PVC resin should be stored in a manner to prevent a direct exposure to sunlight. The storage area should also be dry and preferably don't exceed 50°C. NIC GmbH would not give warranty to bad storage conditions which may lead to quality deterioration such as color change and inadequate product performance./ Jumbo Bag/Bunker.



## SPVC S7042

*Poly(vinyl chloride) (Suspension)*

### **Product Description:**

PVC S70 is a free flowing vinyl chloride homopolymer resin having high molecular weight. It is manufactured by suspension polymerization. PVC S70 has following properties that make it suitable for plasticized PVC processing:

- High porosity (Excellent plasticizer absorption)
- Low content of fines (Easy handling and conveying)
- Good di-electrical properties (Good electrical insulation properties)
- Good transparency and low gels content (Good for transparent applications)

### **Applications:**

PVC S70 is designed to give an easy processing product for flexible applications since it has the ability to fast absorb substantial quantities of plasticizers. It is a high molecular weight resin and therefore, presents good end products 'mechanical properties.

Extrusion:

- Cable sheathing and wire insulation
- Flexible films and sheets
- Flexible profiles
- Hoses
- Flexible articles like shoe soles

Calendering:

- Flexible sheets and films

### **Typical Data:**

TYPICAL TEST	Unit	SPECIFICATION	Test method
K-Value	-	70±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	450~510	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	29~35	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### **Packaging, Delivery and Storage:**

PVC S70 is delivered in 25 kg bags. PVC resin should be stored in a manner to prevent a direct exposure to sunlight. The storage area should also be dry and preferably don't exceed 50°C. NIC GmbH would not give warranty to bad storage conditions which may lead to quality deterioration such as color change and inadequate product performance. /Jumbo Bag/Bunker.



## SPVC S7242

*Poly(vinyl chloride) (Suspension)*

### *Product Description:*

PVC S72, homopolymer made by suspension polymerization, is mainly used in PVC wire extrusion and calender processing, well known for giving clean surfaces and bright color to the finished goods. It can be applied to high quality products.

### *Applications:*

-Heat resistant power cable jacket, film, leather, sheets and hoses.

### *Typical Data:*

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	72±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	430~490	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	30~35	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### *Packaging:*

Paper bag(25kg), Jumbo Bag/Bunker.



## SPVC S8040

*Poly(vinyl chloride) (Suspension)*

### **Product Description:**

PVC S80 is a specialty product for flexible PVC articles with excellent mechanical performance, primarily at elevated service temperatures.

### **Applications:**

PVC S80 is a free-flowing powder with porous particles. It may be processed with all standard additives, such as plasticizers, stabilizers, lubricants, fillers and pigments, similarly to S-PVC with a low K-value. PVC S 80 is mixed by the standard hot or cold mixing methods. Recommended temperatures are 120° C in the heating mixer and 40°C in the cooling mixer. It can be processed in the form of a blend, agglomerates or granules on all standard equipment, such as extruders, injection moulding machines and calenders.

Mixtures containing PVC S 80 are mainly used as follows:

- In the automotive industry to produce high-quality interior and exterior profiles, pedal liners, tubes and tarpaulins.
- In the construction industry for high-quality PVC-seals and gaskets.
- for PVC-cables with high thermal stability under load.

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	80±1	ISO 1628-2/4.4.2.1
Bulk Density	gr/lit	420~480	ISO 60/4.4.2.2
Sieve Analysis >63 µm	%	95~100	ISO 4610/4.4.2.3A
Sieve Analysis >250 µm	%	0~1	ISO 4610/4.4.2.3A
Porosity(plasticizer absorption)	%	30~35	ISO 4608/4.4.2.4
Volatile Matter	Wt%	<0.3	ISO 1269/4.4.2.5

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags as well as in bulk form. PVC S 80 should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing. /Jumbo Bag/Bunker.



## E PVC E60

*Poly(vinyl chloride) (Emulsion)*

### **Product Description:**

PVC E60 is a low molecular weight emulsion type PVC homopolymer with a low/medium emulsifier content. It produces plastisols exhibiting low-medium viscosity at low and high shear rates with slightly pseudoplastic flow properties with low plasticizer levels (40-60 phr). Because of its low molecular weight it may be used on its own or in blends to generally decrease gelling/fusion temperatures and in some cases replace copolymers. It gives good thermal stability with a wide range of stabilizer types especially organo-tin types. The use of high speed type mixers is recommended.

### **Processing and Applications:**

PVC E60 produces plastisols which are suitable for low plasticizer content, high filler content compact and chemically foamed formulations particularly for compact coatings on temperature sensitive fabrics requiring lower fusion temperatures, low expansion temperature chemical foams for flooring and carpet backings and wallcoverings. It is also suitable for use in mechanically foamed formulations. Spreading plastisols can be applied by direct, transfer or rotary screen coating processes.

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	59~61	ISO 1628/2-4.4.2.1
Sieve Analysis >63 µm	%	≤1.5	ISO 565/5.4.4.1
Volatile Matter	Wt%	≤0.3	ISO 1269/4.4.2.5
Methanol extract	Wt%	≤2.5	ISO 6427/5.4.4.2
Residual VCM	(ppm)	≤1	ISO 6401/4.4.2.7
Thermostability (min) Mathiss drying oven	min	>15	5.4.4.3
Paste viscosity After 1 h (Pas)	(Pas)	≤13	ISO 11468 ISO 3219
Part of Quality	%	≥98	5.4.4.4

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags as well as in bulk form.

PVC E60 should be stored dry and away from direct or indirect sources of heat.

Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing. Jumbo Bag/Bunker.



## E PVC E6644

*Poly(vinyl chloride) (Emulsion)*

### **Product Description:**

PVC E66 is a very fine-particle, paste making emulsion homopolymer, giving medium viscosity plastisols with a good shelf life. Plastisols made with PVC E66 have a slightly pseudoplastic rheology (see diagram). PVC E66 exhibits excellent foaming characteristics in chemically blown foams, particularly for screen printing and hot embossing for wall coverin manufacturing.

### **Processing and Applications:**

Plastisols based on PVC E66 can be applied by all commonly used coating techniques.

PVC E66 is recommended for the production of foamed wall coverings having smooth or structured surfaces. The product has the following properties:

- outstanding foaming characteristics; low density foams with fine cell structure, even at very high filler content
- medium viscosity at low shear rates with slightly pseudo plastic flow behaviour
- very fine particle size
- foams with good whiteness
- good foam inhibition (eg with benzotriazole)
- low gelling temperature
- good paste deaeratability
- the product is compatible within a wide range of processing variables, with no tendency to over foaming

### **Typical data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	64~66	ISO 1628/2
Sieve Analysis >63 µm	%	≤1.5	ISO 565
Volatile Matter	Wt%	≤0.3	ISO 1269
Methanol extract	Wt%	≤2.0	ISO 6427
Residual VCM	(ppm)	≤1	ISO 6401
Thermostability (min) Mathiss drying oven	min	>15	-
Paste viscosity After 1 h (Pas)	(Pas)	≤7	ISO 11468 ISO 3219
Part of Quality	%	≥98	-

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags. PVC E66 should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing. Jumbo Bag/Bunker.



## E PVC E6834

*Poly(vinyl chloride) (Emulsion)*

### **Product Description:**

PVC E68 is a fine-particle, paste-making emulsion homopolymer giving low-viscosity plastisols. Pastes with a medium plasticizer content show almost Newtonian flow properties. PVC E68 is suitable for chemically blown foams with a low plasticizer content. The main application areas are relatively rigid foams for flooring and leather cloth.

### **Applications:**

Pastes based on E68 can be applied by all the usual procedures. E68 is well suited for the production of foams having a fine cell structure. It is characterized by the following properties:

- Low initial viscosity
- Good chemical foam ability, regular cell structure
- Good viscosity stability, particularly at storage temperatures of about 40° C
- Excellent release properties from heated metal surfaces (punch process).
- It has also proved suitable for mechanically frothed foams containing silicone based foaming aids.

### **Typical Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	67~69	ISO 1628/2
Sieve Analysis >63 µm	%	≤2	ISO 565
Volatile Matter	Wt%	≤0.3	ISO 1269
Methanol extract	Wt%	≤2.5	ISO 6427
Residual VCM	(ppm)	≤1	ISO 6401
Thermostability (min) Mathiss drying oven	min	>15	-
Paste viscosity After 1 h (Pas)	(Pas)	≤6	ISO 11468 ISO 3219
Part of Quality	%	≥98	-

### **Processing**

Pastes based on E68 can be applied by all the usual procedures.

### **Packaging, Delivery and Storage**

The product is supplied in palletized 25-kg bags.

PVC E68 should be stored dry and away from sources of heat and light. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage and processing. Jumbo Bag/Bunker.



## E PVC E7244

*Poly(vinyl chloride) (Emulsion)*

### **Product Description:**

PVC E72 is a fine-particle emulsion homopolymer for making PVC pastes. Plastisols based on PVC E72 are distinguished by a low initial viscosity and almost newtonian flow properties. Principal applications are pastes for compact vinyl wallcoverings, flooring and leathercloth, as well as for coating of woven and non-woven fabrics and of glass strands.

### **Processing and Applications:**

On account of its favourable rheology at high shear rates, pastes made from PVC E72 can be processed with all the usual coating methods, particularly with reverse roll coaters. The following properties make PVC E72 particularly suited to the manufacture of low plasticizer and/or highly filled pastes:

- very low initial viscosity
- almost linear flow properties
- excellent release effect during contact fusion
- high suitability for mechanically blown foam containing silicone based foaming aids

The low initial viscosity of PVC E72, coupled with its almost linear flow characteristics, allows the production of very thin coatings (< 100 µm), even at high coating speeds on reverse roll coaters and rotary screen printers. The initial viscosity may be reduced further and eventually appearing dilatancy can be eliminated through combinations with extender resins. The high filler-loading capability allows the formulation of particularly cost effective pastes. Pastes based on PVC E7244 are used for base coating of CV-flooring, leading to a smooth surface with no tendency to form plate out on the pre-gelling cylinder.

### **Typical Data:**

TYPICAL TEST	Unit	SPECIFICATION	Test method
K-Value	-	71~73	ISO 1628/2
Sieve Analysis >63 µm	%	≤1.5	ISO 565
Volatile Matter	Wt%	≤0.3	ISO 1269
Methanol extract	Wt%	≤2.5	ISO 6427
Residual VCM	(ppm)	≤1	ISO 6401
Thermostability (min) Mathiss drying oven	min	>20	-
Paste viscosity After 1 h (Pas)	(Pas)	≤5	ISO 11468 ISO 3219
Part of Quality	%	≥98	-

### **Packaging, Delivery and Storage:**

The product is supplied in 25-kg bags as well as in bulk form. PVC E72 should be stored dry and away from direct or indirect sources of heat. Please consult the safety data sheet for information about the safety precautions necessary for transport, storage, blending and processing./ Jumbo Bag/Bunker.



## **E PVC E7544**

*Poly(vinyl chloride) (Emulsion)*

### ***Product Description:***

PVC E75 is a fine particles, high molecular weight PVC homopolymer, made by emulsion polymerization. It is designed for the manufacture of plastisols exhibiting low viscosities at low shear rates and slightly dilatant flow characteristic at high shear rates with plastizer concentration of (40 –60) Phr. Plastisol made from this resin exhibit the following properties:

- Long shelf life, low viscosity aging.
- Low plastisol viscosity
- Easy gelation
- No tendency towards settling out.
- High abrasion resistance
- Good thermal stability with a range of standard stabilizers.
- Low percent of oversized particles
- High filler tolerance
- Good drum gelling

### ***Applications:***

Pastes made from PVC E75 are ideal for compact, clear thin coating, and also for chemically blown spread coatings with low plasticizer content. PVC E75 pastes are particularly suitable for:

- Spread coating of compact layers of low-to medium plasticizer levels having good mechanical properties (conveyer bells, tarpaulins) and good transparency (raincoats, swimming pool liners, tablecloths).
- Spread coating of compact, thin layers made at high speed (wall covering, top coats).
- Spread coating of chemically blown layers with low plasticizer content (handbags, luggage) or With medium-plasticizer and high-filler content (vinyl-backed carpets, cushioned vinyl floor coverings).
- Screen coating of textured foamed wall covering.
- PVC E75 is also suitable for other processes, e.g. rotational molding, slush molding and dipping.



**TYPICAL Data:**

<b>TYPICAL TEST</b>	<b>Unit</b>	<b>SPECIFICATION</b>	<b>Test method</b>
K-Value	-	74~76	ISO 1628/2
Sieve Analysis >63 µm	%	≤1.5	ISO 565
Volatile Matter	Wt%	≤0.3	ISO 1269
Methanol extract	Wt%	≤2.5	ISO 6427
Residual VCM	(ppm)	≤1	ISO 6401
Thermostability (min) Mathiss drying oven	min	>20	-
Paste viscosity After 1 h (Pas)	(Pas)	≤5	ISO 11468 ISO 3219
Part of Quality	%	≥98	-

**PLASTISOL PREPARATION:**

PVC E75 is very easily converted into a paste using intensive or slow speed mixers. If an intensive mixer is used, overheating during mixing must be avoided since this could lead to unwanted increase in viscosity. After mixing, the plastisol may be sieved, passed through a mill and deaerated. Sieving is always useful to avoid contamination and the presence of coarse particles. It is particularly recommended that a mill be used when pastes are intended for top coatings, or if a slow speed mixer is used. Deaeration is always necessary to avoid blisters when pastes are intended for top layers, but is unnecessary when plastisols are used for the manufacture of chemically blown foam.

**Packaging, Delivery and Storage:**

PVC E75 is delivered in paper bags filled using a filling valve. PVC resin should be stored in a manner to prevent a direct exposure to sunlight. The storage area should also be dry and preferably don't exceed 50°C. NIC GmbH would not give warranty to bad storage conditions which may lead to quality deterioration such as color change and inadequate product performance. Jumbo Bag/Bunker