PVC Resins

Test Method

- Degree of Polymerization(DP) : JIS K 6720-2
- Degree of Polymerization (K-Value) : DIN 53726
- Apparent Specific Gravity : ASTM D1895
- Volatile Matter : ASTM D3030
- Particle Size : HCC Method
- VAcM Content : HCC Method

PVC Straight Resins

Item	Degree of Polymerization (DP)	Degree of Polymerization (K-Value)	Apparent Specific Gravity (g/cc)	Volatile Matter (%)	Particle Size (%)	VAcM Content (%)	Feature	Use
P-700	700±50	58	0.56±0.04	Less than 0.30	100	-	Easy processing due to its low-temperature melting characteristic and high liquidity/ good for injection mold products	General hard sheets, bottle, fitting and injection mould
P-800	800±50	61	0.55±0.04	Less than 0.30	100	-	Excellent thermal-resistance and easy processing /good for injection mold products due to high liquidity	Hard sheets, foaming pipe, hard plate, fitting, injection mould and non-toxic sheet
P-1000	1000±50	66	0.55±0.04	Less than 0.30	100	-	Fast melting and excellent work safety. Good for general soft material and hard material products.	Film, sheet, leather, pipe, plate, sash, not-toxic sheet and corrugated plate
P-1000SB	1000±50	66	0.57±0.03	Less than 0.30	100	-	High BD product. Increases productivity for extrusion. Good for hard material products.	Sash, pipe and general hard material extrusion
P-1300	1300±50	72	0.50±0.04	Less than 0.30	100	-	High thermal resistance. Good for high-strength soft products.	Agricultural film, leather, electric cable covering and hose
P-1700	1700±100	76	0.47±0.07	Less than 0.30	100	-	High thermal-resistance. Good for physical property reinforcing blend resin. High degree polymerization resin. Good for high-strength soft products.	Agricultural film, leather, heat-resistant electric cable covering and hose
P-2500	2500±200	83	0.45±0.07	Less than 0.30	100	-	High thermal-resistance, weather-proof, cold-resistance and mechanical strength. It can have rubber elasticity by adding large amount of plasticizer.	Special heat-resistant electric cable covering, flexible hose and leather

PVC Copolymers

Item	Degree of Polymerization (DP)	Degree of Polymerization (K-Value)	Apparent Specific Gravity (g/cc)	Volatile Matter (%)	Particle Size (%)	VAcM Content (%)	Feature	Use
CP-430	450±50	50	0.77±0.07	Less than 4.0	100	15.0±1	High agent solution capability. High adherence, transparency and liquidity. Good for Gravure ink.	Gravure ink, glue and paint
CP-450	550±50	53	0.58±0.07	Less than 4.0	100	13.5±1	High workability, plasticity and thermal safety. High liquidity. Good for general glue.	Paint, glue and ink
CP-705	700±50	58	0.56±0.07	Less than 4.0	100	5.5±1	High initial coloring capability, workability and plasticity. Good for tile production.	Tile and hard plate
CP-710	700±50	58	0.54±0.07	Less than 4.0	100	10.0±1	High adherence, workability and abrasion-resistance. Good for thermal-resistant materials as it has high thermal-resistance.	Reinforcement of pencil lead, thermal-resistance for ink and strippable coating
TP-400M	430±50	50	0.66±0.07	Less than 4.0	100	14.0±1	High adherence for metal. Good for painting and aluminum coating.	Metal coating, aluminum printing ink, heat sealable and plastic coating

PASTE Resins

Test Method

- Degree of Polymerization(DP) : JIS K 6720-2
- Degree of Polymerization (K-Value) : DIN 53726
- Apparent Specific Gravity : ASTM D1895
- Volatile Matter : ASTM D3030
- Particle Size : HCC Method
- VAcM Content : HCC Method
- B.F. Viscosity : ASTM D1824

MSP Resins

Item	Degree of Polymerization (DP)	Degree of Polymerization (K-Value)	Apparent Specific Gravity (g/cc)	Volatile Matter (%)	Particle Size (%)	VAcM Content (%)	B.F. Viscosity (cps/6rpm)	Liquidity	Feature	Use
KH-10	1700±100	76	0.23±0.04	Less than 0.30	100	-	Less than 4,000	Dilatant	Low viscosity, low deterioration and low absorption. High insulating resistance and high transparency.	General use, slush forming, rotational forming, erasers, DIP forming, flooring/wall paper/leather top coatings
KH-31G	1600±50	75	0.29±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity and low deterioration. High transparency. High thermal stability.	Medical gloves, flooring/wall paper/ leather top coatings
KH-31S	1600±50	75	0.29±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity and low deterioration. High thermal stability with form cell. Soft texture after forming.	Casting leather and form products (wall paper and mats)
KH-60	1700±100	76	0.23±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity and high transparency. Excellent water-whitening resistance. Excellent autoclave applications.	Highly transparent label, flooring wall paper, leather top coatings, tarpaulins and rotational forming
KM-31	1300±50	72	0.29±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity, low deterioration and no plate-out. Excellent autoclave applications, good foam cell and fast gelling.	Casting leather, foam materials (wall paper and flooring) and erasers
KM-60	1250±50	71	0.23±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity, low deterioration and no plate-out. High transparency, high autoclave, and high Water-whitening Resistance.	Tarpaulins and transparent labels
KL-10	1000±100	66	0.29±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity, low deterioration and low absorption. Faster gelling than KH products.	Low viscosity and low temperatures sealants
KL-31	1000±50	66	0.29±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	High foam cell/fast gelling. Good for floor materials and foamed wall paper.	Wall paper, flooring, low melting temperature foaming agents and leathers
KL-701	750±50	59	0.23±0.04	Less than 0.30	100	-	Less than 10,000	Dilatant	Low viscosity, fast gelling. Low temperature processing is possible due to low degree of polymerization. High foaming.	Low melting temperature, wall paper and low temperature foaming materials
KCM-12	1000±50	66	0.23±0.04	Less than 0.80	100	5.5±1	Less than 5,000	Dilatant	Copolymer of VCM and VAcM. Fast gelling. Contains 5% of VAcM. Strong adherence.	Ultra-low temperature melting, adhesive SOL, carpet backing and under-body coatings
KCH-12	1400±50	73	0.23±0.04	Less than 0.80	100	5.5±1	Less than 5,000	Dilatant	Low viscosity, fast gelling. Contains 5% of VAcM. Strong adherence.	Low melting temperature, adhesive SOL, carpet backing and under-body coatings
KCH-15	1700±100	76	0.23±0.04	Less than 0.80	100	5.5±1	Less than 5,000	Dilatant	High adhesiveness for metal and high anti-corrosion. /Contains 5% of VAcM. Low viscosity and low deterioration.	Under-body coatings, carpet backing and chipping-proof paint

Blend Resins

Item	Degree of Polymerization (DP)	Degree of Polymerization (K-Value)	Apparent Specific Gravity (g/cc)	Volatile Matter (%)	Particle Size (%)	VAcM Content (%)	B.F. Viscosity (cps/6rpm)	Liquidity	Feature	Use
KBM-4	1000±50	66	0.40±0.07	Less than 0.30	100	-	-	-	Used for battery separators. Diameter : about 26㎛	Battery separator
KBM-10	1000±50	66	0.45±0.07	Less than 0.30	100	-	-	-	Blending Resin. Diameter: about 28㎛. Viscosity decreasing and non-glare effect.	SOL viscosity decreasing resin (floor material, wall paper, tarpaulin, toy and sealant)
HB-65	900±50	63	0.60±0.10	Less than 0.30	100	-	-	-	Blending Resin. Diameter: about 30㎛. Viscosity decreasing and non-glare effect.	SOL viscosity decreasing resin (floor material, wall paper, tarpaulin, toy and sealant)
HB-100	-	-	0.50±0.10	Less than 0.30	100	-	-	-	Blending Resin for non-glare effect. Diameter: about 30㎛. Viscosity decreasing and non-glare effect.	Non-glare enhancing resin (wall paper, tarpaulin), S-PVC non-glare/improvement of workability

Emulsion Resins

Item	Degree of Polymerization (DP)	Degree of Polymerization (K-Value)	Apparent Specific Gravity (g/cc)	Volatile Matter (%)	Particle Size (%)	VAcM Content (%)	B.F. Viscosity (cps/6rpm)	Liquidity	Feature	Use
EL-102	900±50	63	0.28±0.07	Less than 0.30	100	-	Less than 20,000	Newtonian	Very low viscosity. High foaming and high whiteness. Good for environmentally-friendly wall paper.	Environmentally-friendly wall paper and rotary screen wall paper
EL-103	900±50	63	0.28±0.07	Less than 0.30	100	-	Less than 20,000	Newtonian	High viscosity and liquidity. High foaming and high whiteness.	Silk wall paper, rotary screen wall paper and low temperature melting foaming material
EL-203M	1000±50	66	0.33±0.07	Less than 0.30	100	-	Less than 20,000	Pseudoplastic	High foaming/high whiteness. Good for high foaming material.	Silk wall paper, rotary screen wall paper, high foaming material and mats
EM-2070	1150±50	69	0.28±0.07	Less than 0.30	100	-	Less than 75,000	Pseudoplastic	Ideal autoclave applications and low subsidence/low viscosity. Good for fast coating as a filler.	Tarpaulin, flooring and leather
EM-304	1150±50	69	0.28±0.07	Less than 0.30	100	-	Less than 30,000	Pseudoplastic	Mid-viscosity and high foaming. Good for high foaming purposes.	Flooring, high foaming materials, mats, leather and sealants
EM-3090	1150±50	69	0.28±0.07	Less than 0.30	100	-	Less than 100,000	Highly Pseudoplastic	Exellent viscosity, high yield value and high thermal stability, Low temperature gelling. Good for high foaming materials. Excellent viscosity stability.	Cotton (felting) coating, wall paper, high soft leather, sealants and tarpaulins

Package

PVC Straight Resins :
Paper Bag (25kg), Flecon Bag(500kg), Bulk
PVC Copolymers :
Paper Bag (25kg), Flecon Bag(500kg), Bulk
MSP Resins : Paper Bag (20kg), Bulk
Blend Resins : Paper Bag (20kg/25kg), Bulk
Emulsion Resins : Paper Bag (25kg), Bulk

Storage

PVC Resins : Store PVC Resins in a cool, dry, properly-ventilated space away from direct sunlight, and never store Resins near heating equipment, open flames, or areas with high humidity.

Particle size testing method

PVC Straight Resins/Copolymers :
42Mesh(350㎛) Sieve Pass %
MSP Resins, Emulsion Resins :
100Mesh(150㎛) Sieve Pass %
Blend Resins : 60Mesh(250㎛) Sieve Pass %

Viscosity Measuring Condition

MSP Resins, Blend Resins : Resin 100phr, DOP 65phr, 30℃ after one hour
ROTA No.3, 6rpm, LV Type B.F. Viscometer (Except, over 100phr DOP should be used for KM-30)
Emulsion Resins : RV Type B.F. Viscometer (30℃, one hour, 20rpm)
EL-102, EL-103 : Resin 100phr, DOP 65phr, ROTA No.3
EL-203M : Resin 100phr, DOP 65phr, ROTA No.4
EM2070, EH2075 : Resin 100phr, DOP 40phr, ROTA No.6
EM304 : Resin 100phr, DOP 60phr, ROTA No.6

K-value is a reference value which is converted from the degree of polymerization with the use of conversion table of PVC Technology, 4th edition, W.V.TITOW, P44~45.

The data and technical information in this catalog are based on the aggregate experience and knowledge of Hanhwa Chemical and its subcontractors, in addition to the results of tests conducted on PVC paste resin and plasticizer samples.