



WORLD WIDE PARTNERSHIP

kaneka

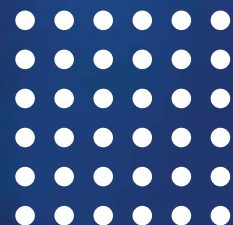
Kanevinyl™



T518A

HM515

T5HX



Kanevinyl™

Solution Vinyl Resin

Kanevinyl™ resins are high performance soluble vinyl polymers that can be used alone or in combination with other polymers, including acrylics, urethanes, alkyds and other resins. These vinyl resins are supplied as dry powders and in different molecular weights and compositions.

Quality and Reliability

WWP is a Brazilian company founded in 1999 by two partners, an Engineer that spent most of his professional career in the industrial area of "Grupo Odebrecht (Brazil)", now called Braskem, and retired as Vice-President of industrial operations, and the other a Chemist and Engineer, specialized in the area of vinyl resins technology who spent most of his career in the areas of research, development and production engineering at Occidental Chemical, in the USA.

The main goals of WWP are the development, optimization of technology and the distribution of added value vinyl copolymers and terpolymers resins with an excellent cost/benefit ratio.

WWP partners with Midland Química do Brasil, Ltda. for distribution of Kanevinyls in Brazil.

MIDLAND

INOVAÇÃO CRIANDO VALOR

Midland Química do Brasil Ltda.

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Kanevinyl™



T518A

Acid Functional Terpolymer



Copolymer

HM515



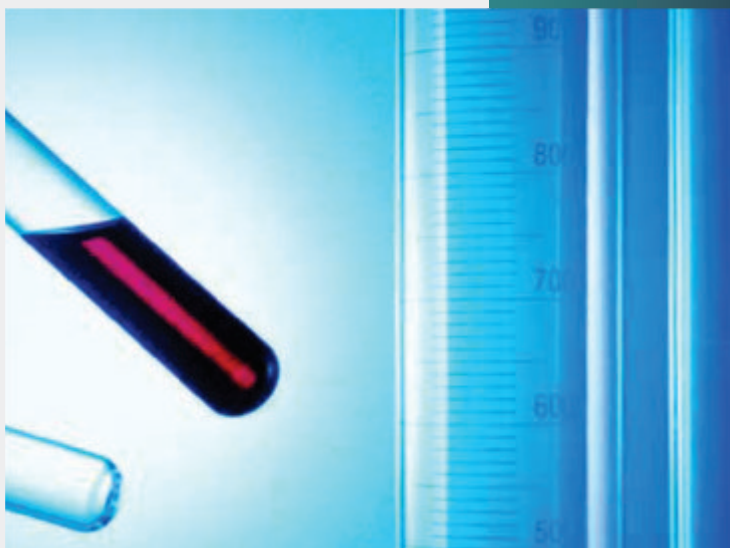
T5HX

Hydroxy Functional Terpolymer

Characteristics and Properties

Kanevinyl is a line of high performance soluble vinyl resins obtained through suspension polymerization processes.

Their characteristics and properties are shown below:



Kanevinyl is a line of high performance soluble vinyl resins obtained through suspension polymerization processes.

Their characteristics and properties are shown below:

They are copolymers or terpolymers resins of vinyl chloride, vinyl acetate and other monomers;

They have low molecular weight, small particle size and high bulk density;

They produce transparent, colorless, high brightness solution and excellent finish on the surface of the end product;

They are sold as dry powders, and are soluble in a wide range of organic solvents, such as MEK, MIBK and other types of ketones. They can be applied using a brush, spray or printing rollers;

They are homogeneous in specification lot-to-lot.





Primers

Kanevinyl resins can be formulated in high quality primers which have excellent adhesion to a variety of substrates, including plastics, metals, and aluminum foils.

Packaging Adhesives

Used to seal “blister-type” packages for food and certain pharmaceutical products. Kanevinyl resin functions as the adhesive layer between aluminum foil polymer substrates in “easy open” food and beverage packaging.

Paints and Varnishes

Suitable for formulation of paints and varnishes used for footwear, automotive plastic parts, laminates, wall paper, PVC and PU substrates, and many others, due to its excellent finish and adhesion.



T518A

HM515

T5HX



Coatings

In coating/finishing applications on wood, metal, plastic and aluminum, Kanevinyl resins provide protection against salinity, acidity and alkalinity.

Other applications

Due to their versatility in formulation, adhesion and surface finish, Kanevinyl can be used in applications that require durability, resistance to abrasion, and when properly formulated, resistance to organic solvents.



Kanevinyl™

Solution Vinyl Resin



Applications (HM515)

- Silkscreen printing inks;
- Printing inks for plastic films;
- Decorative paints for vinyl toys;
- Adhesives, varnishes and vinyl paints in general;
- Adhesives for cardboard for “blister” type packages.



Applications (T5HX)

- Paints for polyurethane (PU) footwear;
- Printing inks for packaging and PVC substrates;
- Anticorrosive paints and/or with high chemical resistance;
- Printing inks for leather, paper and plastics;
- Wood paints of “primer/sealer” type for furniture;
- Primer for automotive plastic parts.



Applications (T518A)

- Adhesive for “blister” type packaging for pharmaceutical products;
- Medical use aluminum foils coatings, galvanized tin coating;
- Metal food can linings, and maintenance and marine coatings;
- Metallic paints;
- Primer for metals.



Kanevinyl™

HM515

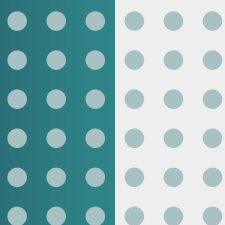
Vinyl chloride and vinyl acetate copolymer resin. Kanevinyl HM515 is used in applications that require excellent solubility. It is compatible with other vinyl chloride-based polymers, as well as almost all types of vinyl acetate-based polymer and acrylates. The composition of Kanevinyl HM515 complies with US FDA regulation 21 CFR 175.300 for use in direct contact with food provided the restriction that maximum thickness of the coating is 8 microns.

T5HX

Vinyl chloride, vinyl acetate and hydroxy propyl acrylate terpolymer resin. Kanevinyl T5HX is used in applications that require excellent solubility and with hydroxyl functionality ("OH"). The presence of hydroxyl groups increase compatibility with several other types of polymers, including certain alkyd resins and polyurethanes. The presence of the hydroxyl group in the molecule allows "crosslinking" in systems ("two- component") that require excellent adhesion, flexibility, hardness and chemical resistance. Paints prepared with this resin show good adhesion to wood, paper and plastic.

T518A

Kanevinyl T518A is Vinyl Chloride, Vinyl Acetate and Fumaric Acid terpolymer resin. Kanevinyl T518A is used in applications that require excellent solubility and functionality of the fumaric acid group. Fumaric acid in the polymer reacts to form a strong ionic bond with many metallic substrates. Kanevinyl T518A films show an excellent adhesion to metal parts, including aluminum, steel and galvanized iron. The composition of Kanevinyl T518A complies with US FDA regulation 21 CFR 175.300 for use in direct contact with food, but restricted to a thickness of the coating of 8 microns or less.



Kanevinyl™

PROPERTY	UNITS	TEST METHOD
Vinyl Chloride Content	%	FT-IR Method
Vinyl Acetate Content	%	FT-IR Method
Hydroxy Propyl Acrylate Content	%	FT-IR Method
Fumaric Acid Content	%	Kaneka Method
Volatile Matter	%	JIS K7382
Brookfield Viscosity in MEK(1)*	mPa • s	Kaneka Method
Brookfield Viscosity in Ethyl Acetate(2)	mPa • s	Kaneka Method
Film Aspect / Solution Appearance(3)	-	Kaneka Method
Average Molecular Weight	-	GPC Method

Grades

T518A	T5HX	HM515
83,0 ± 2,0	81,0 ± 4,0	81,0 ± 2,5
17,0 ± 2,0	11,0 ± 2,0	18,0 ± 2,0
-	8,0 ± 1,0	-
1,0 ± 0,5	-	-
máx. 2,00	máx. 2,00	máx. 2,00
55 -105	55 -105	55 -105
290 - 435	260 - 395	250 - 550
Transparent	Transparent	Transparent
73.000	86.000	70.000

Disclaimer: The data and information contained in this catalog represent our current knowledge, and serve only as a guide for product applications. In case of doubt about specific applications, please contact Midland Química do Brasil, Ltda.

Note: * All values above are preliminary and subject to change.

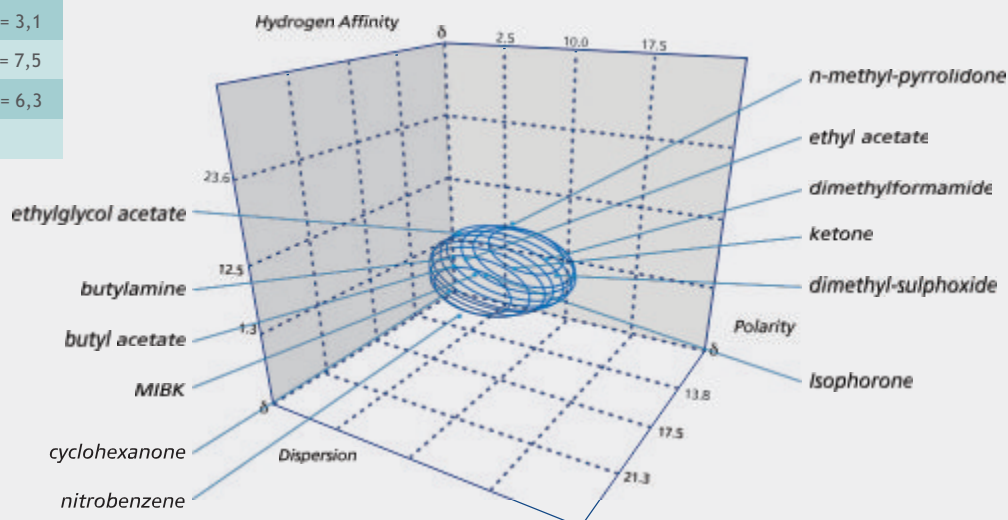
- (1) Brookfield Viscometer - 60rpm, 30s, BM model spindle #2. The solution is prepared at 20% in MEK (Methyl Ethyl Ketone), heated to 30°C for 20 minutes and cooled to room temperature 24 hours.
- (2) Brookfield Viscometer - 60rpm, 30s, BM model spindle #2. The solution is prepared at 20% in Ethyl Acetate, heated to 30°C for 20 minutes and cooled to room temperature 24 hours.
- (3) Solution described in number 1 and spread on a glass plate.

Solubility Parameters

Solvents that provide better solubility to dissolve Kanevinyl resins are Ketones (Ketone, Cyclohexanone, MIBK, MEK, Isophorone, etc). Other solvents, despite being less efficient, can also be used to solubilize Kanevinyl resins.

“Solubility parameters of solvents normally used with Kanevinyl resins”

Dispersion	dD = 17,4	rD = 3,1
Polarity	dP = 10,0	rP = 7,5
Hydrogen Affinity	dH = 7,4	rH = 6,3
values in (J/cm³) ^½		



Recommended parameters of preparation of a Kanevinyl solution

Important: Following this procedure correctly is important to obtain the best possible solution.

1. Use a high-speed Cowles-type disperser;
2. Add enough solvent to obtain a mixture of 40% resin and 60% solvent;
Note: In case of a combination of solvents, add the true (more active) solvent first.
3. Turn on the mixer and add Kanevinyl resin slowly to avoid the formation of agglomerates;
4. Add heat stabilizer (if needed);
5. Mix until the mass heats up to approximately 55°C. Keep mixing at this temperature for 5 (five) minutes;
6. Add the rest of the true solvent;
7. Add the other solvents and additives.
Note: The total time required to form a solution may vary, depending on the mixer speed and/or cowles diameter.

Package and Storage Conditions

Kanevinyl is supplied in plastic bags of 25 Kg. The bags must be stored at temperatures under 35°C, away from direct sunlight exposure, stored at a well ventilated, cool and dark place and kept on pallets to avoid direct contact with the floor.

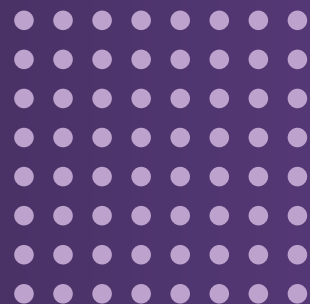
Safety data

Refer to MSDS (Material Safety Data Sheet), available from Midland Quimica do Brasil, Ltda.

Shelf life

One year under recommended storage conditions above.





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*Exclusive Distributor
of Kanevinyl line
in Brazil*

MIDLAND

INOVAÇÃO CRIANDO VALOR