

TERPOLYMER Ethylene – Vinyl Acetate – Maleic Anhydride

Description

OREVAC-T[®] 9304 is a random terpolymer of Ethylene, Vinyl Acetate and Maleic anhydride made by high-pressure radical polymerisation process. **OREVAC-T[®] 9304** is stabilized with antioxidants.

Main applications

OREVAC-T[®] 9304 is a material of choice to produce thermo-adhesive films for solid substrates like PA, PET & PU films, Aluminium foils, fiber mats, foams etc. **OREVAC-T[®] 9304** is very well adapted to be used as tie layer between polyethylene and polyamide in blown film coextrusion. It's also a useful product for hot melt adhesives formulation.

Typical characteristics

Characteristics	Value	Unit	Test Method
Vinyl Acetate Content	23.5 – 26.5	% wt	FTIR (internal)
Melt Index (190°C / 2.16 kg)	5.5 – 9.3	g/10mn	ISO 1133 / ASTM D 1238
Maleic Anhydride Content (Mini.)	1600	ppm	FTIR (internal)
Density (23°C)	0.950	g/cm ³	ISO 1183
Melting point	80	°C	DSC
Vicat softening point (10 N)	49	°C	ASTM D 1525 / ISO 306
Ring & Ball temperature	153	°C	ASTM E28
Hardness Shore A / D (15 sec)	82 / 29		ASTM D 2240 / ISO 868

Main properties

- As an ethylene copolymer, **OREVAC-T[®] 9304** is compatible with PE in all proportions, and with almost all other ethylene copolymers.
- Vinyl Acetate brings softness, flexibility and polarity.
- Maleic Anhydride gives reactivity, leading to versatile adhesive properties to polar and non polar substrates in lamination (thermo-adhesive films) and to molten polymers in coextrusion.
- As a result of high pressure polymerization in tubular reactor, **OREVAC-T[®] 9304** has a high transparency (low haze).
- **OREVAC-T[®] 9304** is compatible with tackifying resins and waxes.

Processing

OREVAC-T® 9304 can be processed on any kind of conventional equipment used for thermoplastics. It should not be overheated during processing. It is necessary to avoid having molten polymer temperature higher than 230 °C and it is recommended to purge and clean the equipment with product adapted (PEBD etc.) before stopping the machines.

Physical properties

Characteristics	Typical Values on molded sample (1)	Typical Values on blown film (2)	Unit	Test Method
Tensile strength at yield	2.6	4	MPa	ASTM D638(1) / D882(2)
Tensile strength at break	26	26	MPa	ASTM D638(1) / D882(2)
Elongation at break	600-900	700 - 900	%	ASTM D638(1) / D882(2)
Haze		4.6	%	ASTM D 103
Dart test		400	gr	ASTM D 1709
Young modulus	23		MPa	ISO R 527

(1) On compression molded samples (specimens ISO 527-2, 5A type - thickness 2.8 mm - cross head speed 50mm/min)

(2) On extruded blown films (50 µm thickness, blow up ratio = 2, longitudinal direction, cross head speed 500mm/min)

Packaging

OREVAC-T® 9304 is available in pellet form and commonly packed in 25 kg PE bags on pallets of 1.375 tones. Other packaging can be considered (ask your Arkema's representative).

Security / Precautions of use

A safety data sheet as well as information on handling and storage of the **OREVAC-T® 9304** are available close to your correspondent ARKEMA or on the site www.orevac.com under heading FDS/MSDS.

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