

TERPOLYMER Ethylene – Vinyl Acetate – Maleic Anhydride

Description

OREVAC-T[®] 9314 is a random terpolymer of Ethylene, Vinyl Acetate and Maleic anhydride made by high-pressure radical polymerisation process. **OREVAC-T[®] 9314** is stabilized with antioxidants.

Main applications

OREVAC-T[®] 9314 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[®] 9314** is very well adapted to be used as tie layer between polyethylene and polyamide in blown film and cast film coextrusion as well as tie layer for PE/PA coextruded tubes. It can also be used as a coupling agent in cables compounds

Typical characteristics

| Characteristics | Value | Unit | Test Method |
|----------------------------------|-----------|-------------------|------------------------|
| Vinyl Acetate Content | 13 – 15 | % wt | FTIR (internal) |
| Melt Index (190°C / 2.16 kg) | 1.5 – 2.5 | g/10mn | ISO 1133 / ASTM D 1238 |
| Maleic Anhydride Content (Mini.) | 800 | ppm | FTIR (internal) |
| Density (23°C) | 0.938 | g/cm ³ | ISO 1183 |
| Melting point | 95 | °C | DSC |
| Vicat softening point (10 N) | 71 | °C | ASTM D 1525 / ISO 306 |
| Ring & Ball temperature | > 200 | °C | ASTM E28 |
| Hardness Shore A / D (15 sec) | 92 / 33 | | ASTM D 2240 / ISO 868 |

Main properties

- As an ethylene copolymer, **OREVAC-T[®] 9314** 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[®] 9314** has a high transparency (low haze).
- **OREVAC-T[®] 9314** delivers high cohesive strength and compatibility with any kind of fillers (cable compounds).

Processing

OREVAC-T® 9314 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 | 4.7 | 5.5 / 4.5 | MPa | ASTM D638(1) / D882(2) |
| Tensile strength at break | 23 | 25 / 21 | MPa | ASTM D638(1) / D882(2) |
| Elongation at break | 700-900 | 550 / 700 | % | ASTM D638(1) / D882(2) |
| Haze | | 4.7 | % | ASTM D 103 |
| Dart test | | 365 | gr | ASTM D 1709 |
| Young modulus | 67 | 52 / 52 | 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 / transverse direction, cross head speed 500mm/min)

Packaging

OREVAC-T® 9314 is available in pellet form and commonly packed in 25 kg PE bags on palets 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® 9314** are available close to your correspondent ARKEMA or on the site www.arkema.com under heading FDS.

November 2007

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Technical Polymers Division
420, rue d'Estienne d'Orves
92705 COLOMBES Cedex
www.arkema.com



www.orevac.com