

Ethylene-Vinyl Acetate Copolymer TN2005

Description:

TN2005 is an Ethylene-Vinyl Acetate (EVA) copolymer with high molecular weight, excellent mechanical properties, transparency, high gloss and easy processability. Additionally, TN2005 has flexibility even at low temperatures and good sealing properties. TN2005 can be used as base polymer for the manufacture of greenhouse films with excellent thermal properties. More detailed information about agricultural film applications and light stabilization recommendations, please contact a Braskem representative.

Applications:

Thermal films to cover agricultural greenhouses, High transparency films with high mechanical resistance, Food packaging

Control Properties:

| Feature | Method | Units | Values |
|-------------------------------|----------------|----------|--------|
| Melt Flow Rate (190°C/2.16kg) | ASTM D 1238 | g/10 min | 0.5 |
| Vinyl-Acetate Content | ASTM D 5594-98 | % | 13.5 |

Typical Properties - EVA:

Plaque Properties (a)

| Feature | Method | Units | Values |
|-------------------------------------|----------------|-------------------|--------|
| Density | D 1505 / D 792 | g/cm ³ | 0.935 |
| Tensile Strength at Break | D 638 | MPa | 25 |
| Elongation at Break | D 638 | % | 680 |
| Hardness | D 2240 | Shore A / D | 91/50 |
| Melting Point | D 3418 | °C | 94 |
| Vicat Softening Temperature at 10 N | D 1525 | °C | 75 |

(1) Braskem test method available for customers. (a) Test specimens prepared from compression molded plate according to ASTM D 4703. (b) Compression molded 2 mm thickness, 0.3 mm notched-plaques; 100% Igepal; 50°C.

Typical Properties - EVA (film):

Blow Film Properties (b)

| Feature | Method | Units | Values |
|-----------------------------------|------------|-------|-----------|
| Tensile Strength at Break (MD/TD) | D 882 | MPa | 32 / 32 |
| Elongation at Break (MD/TD) | D 882 | % | 750 / 800 |
| 1% Secant Modulus (MD/TD) | D 882 | MPa | 58/64 |
| Dart Drop Impact Strength | D 1709 (B) | gF | 725 |
| Elmendorf Tear Strength (MD/TD) | D 1922 | gF | 240/350 |
| Haze | D 1003 | % | 2 |
| Gloss - Angle 45° | D 2457 | - | 95 |

(MD = Machine Direction; TD = Transversal Direction) (1) Braskem test method available for customers. (b) 50 µm thickness film, processed in a 50 mm blow film line with barrier screw. 25:1 L/D and a 1,0 mm die gap at a 2,3: 1 blow up ratio.

Final Remarks:

- This resin meets the requirements for ethylene-vinyl acetate copolymers as defined in 21 CFR, section 177.1350 issued by FDA - Food and Drug Administration in force on the date of publication of this specification. The additives present are covered in appropriate regulation by FDA.
- The information presented in this Data Sheet reflects typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Quality are considered as guarantee of the product.
- In some applications, Braskem has developed tailor-made resins to reach specific requirements.
- In case of doubt regarding utilization, or for other applications, please contact our Technical Assistance Area.
- For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS registry number: 24937-78-8.
- The mentioned values in this report can be changed at any moment without Braskem previous communication.
- Braskem does not recommend this grade for packages, parts or any kind of product manufacture that will be used for

- storage or contact with solution that will have internal contact with human body.
8. This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.