

## 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.

### Additives

Antioxidant

### Application:

Thermal agricultural film (greenhouse coverage). No UV-additives.

Blown film mono or co-extrusion for food packaging

Films for frozen food packaging

High clarity film with excellent mechanical properties.

### Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190/2.16)	D 1238	g/10 min	0.50
Vinyl-Acetate Content	Braskem1	%	13.5

### Typical Properties:

#### Plaque Properties<sup>a</sup>

	ASTM Method	Units	Values
Density	D 1505	g/cm <sup>3</sup>	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

#### Blow Film Properties<sup>b</sup>

	ASTM Method	Units	Values
Tensile Strength at Break (MD/TD)	D 882	MPa	32 / 32
Elongation at Break (MD/TD)	D 882	%	750 / 800
2% Secant Modulus (MD/TD)	D 882	MPa	60/70
Dart Drop Impact Strength	D 1709 (Method 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.

(a) Compressed molded plate. Method ASTM D 4703.

(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.



## Recommended Processing Conditions:

### Blow Film Extrusion

- Temperature Profile:.....from 145 to 185°C
- Mass Temperature:..... from 170 to 185°C
- Blow up Ratio:.....from 2.0 to 3.0:1
- Die Gap:.....1.0 to 1.5 mm

The optimum processing conditions will vary according to the type of equipment used and cannot be considered as performance guarantee.

## Final Remarks:

1. This resin meets the requirements for "Ethylene-Vinyl Acetate Copolymers", as defined in 21 CFR, section 177.1350 issued by FDA – Food and Drugs Administration in force on the date of publication of this specification. The additives present are covered in appropriate regulation by FDA.
2. 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.
3. In some applications, Braskem has developed tailor-made resins to reach specific requirements.
4. In case of doubt regarding utilization, or for other applications, please contact our Technical Assistance.
5. For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 24937-78-8.
6. The mentioned values in this report can be changed at any moment without Braskem previous communication.
7. 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. The content of this Data Sheet replaces previous revisions published for this product.
9. This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.