



# BOLPHANE <sup>R</sup><sup>3</sup>

**RENEW  
REDUCE  
RECYCLE**

## B-Nat<sup>®</sup> F

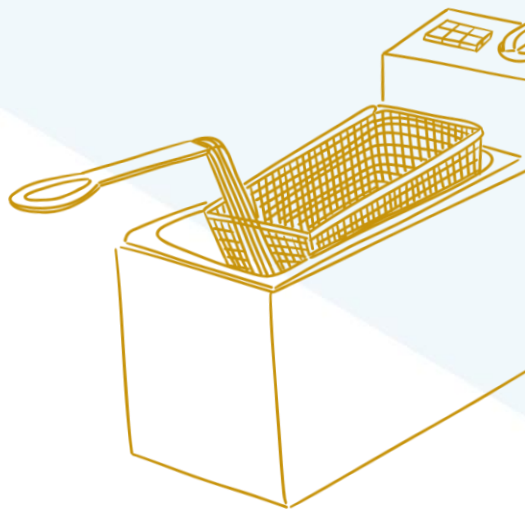
Ultrathin display shrinkfilm on the basis of a **green** polyethylene, high toughness crosslinked

### Polyethylene from **used cooking oil**.

It consists of **20%** of a polyethylene produced from used cooking oil according to a mass balance management, **certified ISCC+**.

Besides coming from a renewable natural source, this green PE provides the same performances as a fossil polyethylene.

- Exceptional mechanical resistance to assure protection and product integrity.
- Easy to seal and shrink and compatible with a wide variety of packaging equipments.
- Combines toughness and softness. Adapts to the most demanding shapes and configurations.
- Good optic for best shelf appearance.
- Recyclable, contributes to minimising the carbon footprint.



Options for disposal are **recycling** (compatible with SPI code 4/PE-LD), incineration with energy recovery and landfill. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial and local regulations.

### Disposal

### Food contact

Complies with EU and US regulations on food contact materials. See the « Declaration of Conformity » of concerned film reference for details.

### Film storage

The maximum temperature for storage is 32° C, with a maximum of 80% RH, up to one year.

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## Technical Specifications

| Technical properties                  | Test unit                   | Test Method                                                     | Values |       |
|---------------------------------------|-----------------------------|-----------------------------------------------------------------|--------|-------|
| Reference                             |                             | BNAT-F-15                                                       |        |       |
| Presentation                          |                             |                                                                 |        |       |
| Grade                                 |                             |                                                                 | 15     |       |
| Roll Length- Singlewound (S)          | m                           |                                                                 | 2 670  |       |
| Roll Length- Centerfolded (C )        | m                           |                                                                 | 1 335  |       |
| Width - Singlewound (S)               | mm                          | <u>mini</u> : 150 - <u>maxi</u> : 1 400 - <u>increment</u> : 5  |        |       |
| Width - Centerfolded (C )             | mm                          | <u>mini</u> : 150 - <u>maxi</u> : 1 000 - <u>increment</u> : 50 |        |       |
| Friction coefficients ( film to film) |                             |                                                                 |        |       |
| Static                                |                             | ASTM D1894                                                      | 0.25   |       |
| Dynamic                               |                             | ASTM D1894                                                      | 0.18   |       |
| Optical properties                    |                             |                                                                 |        |       |
| Haze                                  | %                           | ASTM D1003-A                                                    | 4.0    |       |
| Gloss at 20°                          |                             | ASTM D2457                                                      | 120    |       |
| Shrinkage properties                  |                             |                                                                 | LD*    | TD*   |
| Free shrink at 93°                    | %                           | ASTM D2732                                                      | 12     | 17    |
| Free shrink at 120°                   | %                           | ASTM D2732                                                      | 78     | 78    |
| Shrink force                          | kg/cm²                      | NFT 54-125                                                      | 25     | 30    |
| Mechanical properties                 |                             |                                                                 | LD*    | TD*   |
| Stiffness modulus                     | Mpa                         | ASTM D882                                                       | 380    | 380   |
| Elongation at break                   | %                           | ASTM D882                                                       | 130    | 135   |
| Tensile strength                      | Kg/cm²                      | ASTM D882                                                       | 1 600  | 1 600 |
| Barrier properties                    |                             |                                                                 |        |       |
| Water vapor transmission rate         | g/m²/24h<br>38°C, 95%<br>HR | ASTM E96                                                        | 17     |       |
| Oxygen transmission rate              | cm³/m²/24h<br>23°C, 0% HR   | ASTM D3985                                                      | 10 700 |       |

\* LD = Longitudinal Direction  
\* TD = Transversal Direction

Characteristics are those of a non-perforated film



The technical features of the products defined herein are given as typical values. They are the best information available to us and we believe them to be reliable. Users have to check-up that they are suitable with all the applications as performance may vary with processing conditions. Unless previous warning, BOLLORÉ has the right to change at any time the definition and technical features of its products.