



Nahar

POLY FILMS LTD.



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| PRODUCT CODE TTR | TRANSPARENT NON HEAT SEALABLE BOTH SIDE TREATED APPLICATION : REVERSE PRINTING AND LAMINATION. |
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TECHNICAL DATA SHEET BOPP

| PROPERTIES | TEST METHOD | UNIT | POSITION | TTR 15 | TTR 18 | TTR 20 |
|------------|-------------|------|----------|--------|--------|--------|
|------------|-------------|------|----------|--------|--------|--------|

PHYSICAL

| | | | | | | |
|---------------------|------------|--------------------|--|------|------|------|
| Thickness | ASTM D 374 | MICRON | | 15 | 18 | 20 |
| Grammage | NTM | gm/m ² | | 13.7 | 16.4 | 18.2 |
| Yield | NTM | m ² /kg | | 73.0 | 60.9 | 54.9 |
| Thickness variation | | %(±) | | 3 | | |

SURFACE

| | | | | |
|-----------------------|-------------|---------|----------------|----------|
| Treatment Level (min) | ASTM D 2578 | dyne/cm | Side1 side2 | 40 38 |
|-----------------------|-------------|---------|----------------|----------|

OPTICAL

| | | | | |
|-------|-------------|---|--|-----------|
| Haze | ASTM D 1003 | % | | 1.5 - 2.0 |
| Gloss | ASTM D 2457 | - | | 90 - 95 |

MECHANICAL

| | | | | |
|-------------------------|-------------|--------------------|----|---------------|
| Coefficient Of Friction | ASTM D 1894 | Static | | 0.35 - 0.40 |
| | | Kinetic | | 0.30 - 0.35 |
| Tensile strength | ASTM D 882 | Kg/cm ² | MD | 1200 - 1500 |
| | | | TD | 2200 - 2600 |
| Modulus | ASTM D 882 | Kg/cm ² | MD | 15000 - 19000 |
| | | | TD | 26000 - 30000 |
| Elongation | ASTM D 882 | % | MD | 140 - 180 |
| | | | TD | 40 - 80 |

THERMAL

| | | | | |
|--------------------------|-------------|---|----|-----------|
| Shrinkage at 120°C/ 5min | ASTM D 1204 | % | MD | 3.0 - 5.0 |
| | | | TD | 1.0 - 3.0 |

BARRIER

| | | | | | | |
|--------------------------------|-------------|------------------------|---|------|------|------|
| Water Vapour Transmission Rate | ASTM F 1249 | GM/M ² /24h | - | ≤7.5 | ≤6.5 | ≤5.5 |
| Oxygen Gas Transmission Rate | ASTM D 3985 | cc/M ² /24h | - | 2050 | 1850 | 1850 |

The values given in this technical datasheet are typical performance data and are believed to be accurate. These are given in good faith but it is for the customer to satisfy of the suitability for its own particular purpose. NAHAR POLY FILMS LTD. Suggests to the customer to confirm these values and product compatibility prior to their use and the company offers neither guarantee nor accept any responsibility for the fitness of the product for any other use.

Treatment value of BOPP films tend to decay over a period of time during transportation & storage conditions. Therefore it is recommended that the customer should check the treatment levels prior to processing and if a reduction is observed then online corona treatment, high adhesive GSM & a suitable primer may be applied.

NTM: NAHAR TEST METHOD, MD : MACHINE DIRECTION ,TD : TRANSVERSE DIRECTION