

Technical Data Sheet

TRIPLEX FILM

(Non Toxic Food/Pharma Grade Material)

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 $Complex : 250~\mu~PVC~X~25\mu~PE~x~90~GSM~PVDC$

Color Range: Clear, Amber, Blue, Green, Orange, Peach, Red, White Opaque, Yellow & other colors upon

| request | | | | |
|---------|--|-------------|---------------------------|--------------------------------------|
| Sr.No. | Properties | Test Method | Unit | Specification |
| 1 | Color & Appearance | In-house | | As per standard sample |
| 2 | Thickness of Rigid PVC film | DIN 53370 | microns | 250 ± 10% |
| 3 | Thickness of Rigid PE film | DIN 53370 | microns | 25 ± 10% |
| 4 | Total Thickness | DIN 53370 | microns | 330 ± 10% |
| 5 | GSM of Rigid PVC film | DIN 2286 | gm/m2 | 340 ± 10% |
| 6 | GSM of Rigid PVDC film | DIN 2286 | gm/m2 | 90 ± 3 |
| 7 | GSM of Rigid PE film | DIN 2286 | gm/m2 | 23 ± 10% |
| 8 | Total GSM | DIN 2286 | gm/m2 | 453 ± 10% |
| 9 | Dimensional Changes - Longitudinal | ASTM D1204 | % | -5.0 |
| | Dimensional Changes - Transversal | | | +2.0 |
| 10 | Dart Impact Strength (from height of 1.52 mtrs) | ASTM D1709 | gm | 350 min. |
| 11 | Tensile Strength - Longitudinal | ASTM D882 | kg/Sq.cm | 450 min. |
| | Tensile Strength - Transverse | | | 450 min. |
| 12 | Elongation - Longitudinal | ASTM D882 | % | 5 min. |
| | Elongation - Transverse | | | 5 min. |
| 13 | WVTR @ 38°C & 90% RH | ASTM F1249 | gm/m ² /24 hr. | 0.4 Max. |
| 14 | Forming Temperature | In-house | °C | 110 –170 |
| 15 | Toxicity Test | USP Current | - | Non-toxic |
| 16 | Residue VCM | ASTM D 3749 | ppm | 1 max |
| 17 | Identification - PVC | FTIR | - | As per Standard IR spectrum |
| 18 | Identification - PVDC | In-house | - | Color of PVdC layer shall turn brown |
| 19 | Heat Seal Strength | In-house | Kg/cm | 0.30 min. |
| 20 | Global migration | 2005/79/EC | ppm | < 60 |
| 21 | Inner Diameter of Core | In-house | mm | 76 +/- 1 |
| 22 | Width | In-house | mm | Std. +/- 1 |



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Regulatory Compliances:

- Commission Directive 2005/79/EC (including amendment 2004/19/EC): Plastic material and articles in contact with Food Regulations.
- Commission Directive 94/63/EC (including amendment 2004/12/EC): Packaging and packaging waste (providing limits in the heavy metal content)
- Council Directive 78/142/EEC Specifying limit of vinyl chloride monomer content.
- European Pharmacopoeia 3.1.11 (Current Edition) Containers for Dry Dosage Forms for Oral Administration
- European Pharmacopoeia 3.2.2 (Current Edition) Plastic Containers and Closures for Pharmaceutical Use
- USP 661 (Current Edition) Containers for Non-Sterile Solid & Liquid Dosage Forms.
- The additives used in these films comply with the quantitative and qualitative requirements of EC and 21 CFR Part 177.