



ICM PLASTICS PVT.LTD., DAMAN
Title
TECHNICAL SPECIFICATION

| | |
|----------------|-------------|
| Doc No | : ICM/SP/FG |
| Issue No. | :01 |
| Revision No. | :00 |
| Effective Date | :01.10.2013 |
| Issue Date | :01.10.2013 |
| Review Date | :01.10.2015 |

Page 5 of 10

TRIPLEX
PVdC coated PVC-PE film
(Non Toxic Food/Pharma Grade Material)

Color Range: Clear & other colors upon request

Complex : 200/25 X 40 gsm

Technical Data:

| Sr.No. | Properties | Test Method | Unit | Specification |
|--------|--|-----------------|---------------------------|------------------------|
| 1 | Color & Appearance | In-house | --- | As per standard sample |
| 2 | Total Thickness | DIN 53370 | microns | 250 ± 7% |
| 3 | Thickness of Rigid PVC film | DIN 53370 | microns | 200 ± 7% |
| 4 | Thickness of PE | DIN 53370 | microns | 25 ± 7% |
| 5 | Total GSM | DIN EN ISO 2286 | gm/m ² | 335 ± 7% |
| 6 | GSM of Rigid PVC film | DIN EN ISO 2286 | gm/m ² | 272 ± 7% |
| 7 | GSM PVdC coating | DIN EN ISO 2286 | gm/m ² | 40 ± 3 |
| 8 | Dimensional Changes Longitudinal (shrinkage) Transversal (expansion) | ASTM D1204 | % | -7 max. +2 max. |
| 9 | Dart Impact Strength (from height of 1.52 mtrs) | ASTM D1709 | gm | 350 min. |
| 10 | Tensile Strength Longitudinal Transverse | ASTM D882 | kg/Sq.cm | 450 min. 450 min. |
| 11 | Elongation at Peak Load Longitudinal Transverse | ASTM D882 | % | 5 min. 5 min. |
| 12 | WVTR @ 90% RH & 38°C | ASTM F1249 | gm/m ² /24 hr. | 0.4 max |



ICM PLASTICS PVT.LTD., DAMAN
Title
TECHNICAL SPECIFICATION

| | |
|----------------|-------------|
| Doc No | : ICM/SP/FG |
| Issue No. | :01 |
| Revision No. | :00 |
| Effective Date | :01.10.2013 |
| Issue Date | :01.10.2013 |
| Review Date | :01.10.2015 |

Page 6 of 10

TRIPLEX
PVdC coated PVC-PE film
(Non Toxic Food/Pharma Grade Material)

| Sr.No. | Properties | Test Method | Unit | Specification |
|--------|---|---------------------|-------|---|
| 13 | Forming Temperature | In-house | °C | 110 –170 |
| 14 | Toxicity Test | USP Current Edition | - | Non-toxic |
| 15 | Identification - PVC Identification - PVdC | FTIR Morpholin | - | As per Standard FTIR spectrum Passes Color of PVdC layer should turn brown |
| 16 | Heat Seal Strength | In-house | Kg/cm | 0.30 min. |
| 17 | Global migration | 2005/79/EC | ppm | < 60 |
| 18 | Inner Diameter of Core | In-house | mm | 76 +/- 1 |
| 19 | Width | In-house | mm | +/- 1 |

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.
- 21CFR Part 177 – Indirect Food Additives: Polymers – Applicable for PVdC coated PVC/PE film.
- The additives used in these films comply with the quantitative and qualitative requirements of EC and 21 CFR Part 177.