Rowad International Geosynthetics Co. Ltd.

TASNEE التصنيع

# PRODUCT TECHNICAL DATA SHEET

## ROWAD HDPE DOUBLE SMOOTH WHITE/ BLACK (HDSWB):

ROWAD HDPE Geomembranes are produced from prime quality, high molecular weight resins and are specially designed for most containment and environmental protection applications. The finished product has exceptional mechanical and chemical resistance properties, is highly durable with excellent aging, UV resistance and Environmental Stress Crack Resistance properties making it very suitable for most exposed applications. ROWAD Geomembranes are produced with virgin resins and DO NOT contains any fillers, foreign additives or plasticizing agents.
The ROWAD Geomembrane specification shown below meets or exceeds GRI GM 13 Standards.

| Tested Prosperities | Test Method | Frequency | HDS075 | HDS100 | HDS150 | HDS200 | HDS250 | HDS300 |
|---|---|---|---|---|---|---|---|---|
| Thickness, (min. ave) mm | ASTM D 5199 | Per roll | 0.75 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 |
| Lowest individual reading (-10%) | | | 0.68 | 0.90 | 1.35 | 1.80 | 2.25 | 2.70 |
| Density(min ave), g/cm$^3$ | ASTM D 792 | 90,000 Kgs | 0.940 | 0.940 | 0.940 | 0.940 | 0.940 | 0.940 |
| Tensile Properties , (min. ave) | ASTM D 6693, | | | | | | | |
| Strength at Yield , N/mm | Type IV | | 11 | 15 | 22 | 29 | 37 | 44 |
| Strength at Break, N/mm | 50mm /min | | 22 | 30 | 45 | 58 | 75 | 85 |
| Elongation at Yield, % | G.L. = 33 mm | 9,000 Kgs | 12 | 12 | 13 | 13 | 13 | 13 |
| Elongation at Break, % | G.L. = 50 mm | | 700 | 700 | 700 | 700 | 700 | 700 |
| Tear Resistance,(min ave) N | ASTM D 1004 | 20,000 Kgs | 93 | 125 | 187 | 249 | 311 | 374 |
| Puncture Resistance,(min ave) N | ASTM D 4833 | 20,000 Kgs | 260 | 360 | 520 | 680 | 840 | 1000 |
| Carbon Black Content, (range) % | ASTM D1603/4218 | 9,000 Kgs | 2.0-3.0 | 2.0-3.0 | 2.0-3.0 | 2.0-3.0 | 2.0-3.0 | 2.0-3.0 |
| Carbon Black Dispersion | ASTM D 5596 | 20,000 Kgs | +Note 1 | +Note 1 | +Note1 | +Note 1 | +Note 1 | +Note 1 |
| Notched Constant Tensile Load, hrs | ASTM D 5397 | Per GRIGM10 | 500 | 500 | 500 | 500 | 500 | 500 |
| Oxidative Induction Time, mins | ASTM D 3895 | 90,000 Kgs | 100 | 100 | 100 | 100 | 100 | 100 |
| Dimensional Stability, % | ASTM D 1204 | Resin batch | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |
| Oven Aging at 85°C<br>HP OIT % retained after 90 days | ASTM D 5721<br>ASTM D 5885 | Per formulation | >80 | >80 | >80 | >80 | >80 | >80 |
| UV Resistance<br>HP OIT % retained after 1600 hrs | GM 11<br>ASTM D 5885 | Per formulation | >50 | >50 | >50 | >50 | >50 | >50 |
| ***Standard Roll Dimensions*** | | | | | | | | |
| Width(m) BF / FD | RTM | Per Roll | 7.5/8 | 7.5/8 | 7.5/8 | 7.5/8 | 6.5/8 | 6.5/8 |
| Length(m) BF / FD | RTM | Per Roll | 225/225 | 170/170 | 110/110 | 80/80 | 70/70 | 50/50 |
| Area (m²) BF / FD | RTM | Per Roll | 1687.5/1800 | 1275/1360 | 825/880 | 600/640 | 455/560 | 325/400 |

**NOTES:**

1: Carbon black Dispersion only applies to near spherical agglomerates. 10 of 10 views in Category 1 or 2.
2: Testing frequencies are rounded the nearest full roll.
3: Roll lengths & widths have a tolerance of ±1%.
4: NCTL/OIT Results For Smooth and Textured materials are taken from SMOOTH Section/Selvedge of the Role & All 3rd Party Tests must be taken from this section only.
5. Where offered- Conductive layers will be complete across the bottom of each role. (Standard Conductive will be BF or FD while Premium conductive will be BF only).
6. For reference; BF= Blown Film, FD= Flat Die.
7. Where offered single Textured rolls will be located on the upper face Unless otherwise agreed.


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