

# International Diamond Systems, Inc.

## Product Data Sheet

### TPO 45 mil Membrane

#### Description:

International Diamond Systems (IDS) TPO 45 mil thermoplastic polyolefin single-ply membrane systems have been engineered to provide premium performance at a very cost-effective price. Strong, flexible, durable IDS TPO 45 mil membrane is suitable for use in all types of single-ply systems: Mechanically Attached, Fully Adhered and Ballast Applied.

Physical Properties	ASTM Test Method	ASTM 6878 Minimum	Typical Test Data
1. Certain data is provided in MD (machine direction) x CMD (cross machine direction) format. 2. Data is base upon typical product performance, and is subject to normal manufacturing tolerance and variance.			
Nominal Thickness	ASTM D-751	0.039" (min.)	0.045"
Breaking Strength	ASTM D-751 Grab Method	220 lbf/in.	285 lbf x 245 lbf
Factory Seam Strength	ASTM D-751	66 lbf	Pass (membrane Failure)
Elongation at Break	ASTM D-751	15%	30%
Heat Aging	ASTM D-573	90% Retention of Breaking Strength and Elongation At Break	100%
Tear Strength	ASTM D-751 8" x 8" Sample	55lbf	124 lbf x 140 lbf
Puncture Resistance	FTM 101C Method 2031	Not Established	290 lbs.
Cold Brittleness	ASTM D-2137	-40 C	-40 C
Permeance	ASTM E-96	Not Established	0.070 Perms
Dimensional Change	ASTM D-1204 @ 158 F, 6 hrs.	+/- 1%	0.4%
Water Absorption	ASTM D-471 @ 158 F, 1 week	+/- 3.0% max.	0.7%
Hydrostatic Resistance	ASTM D-751 Method D	Not Established	390 psi
Ozone Resistance	ASTM D-1149	No visible deterioration @ 7 x magnification	No visilble deterioration @ 7 x magnification
Reflectivity	ASTM C1549 & E408	N/A	0.76
Emissivity	ASTM E903	N/A	0.90

#### Product Data

<b>Roll Size</b>	Note: Product sizes, dimensions, and widths are nominal values and are subject to normal manufacturing/packaging tolerance and variations				
	Colors	Full Roll Size	Full Roll Weight	Half Roll Size	Half Roll Weight
	White, Tan, Gray	10' x 100' (1,000 sq. ft.)	256 lbs.	5' x 100' (500 sq. ft.)	128 lbs.
	Note: Membrane rolls shipped horizontally on pallets.				
<b>Storage</b>	Store rolls on their sides on pallets or shelving in a dry area.				
<b>Safety Warning</b>	Membrane rolls are heavy, and are best positioned and installed by at least two people.				