

# HYDRAFLEX™ PRO HP40

SMOOTH FLEXIBLE POLYETHYLENE

RAVEN

## PRODUCT DESCRIPTION

HydraFlex™ Pro HP-Series are co-extruded linear-low density polyethylene geomembranes developed for applications requiring enhanced flexibility along with a combination of high strength and impact resistance. These elements are critical for the pliability necessary in reliable, above-ground tank lining systems, as well as earthen pits and ponds.

The gray color on the top layer minimizes thermal expansion while providing a cooler surface. Contrasting colors also provide a vital function for ease of damage detection during the installation process. The additive package in the black bottom layer includes carbon black and thermal stabilizers for protection from UV radiation. Both sides are designed for ease of welding in the factory or field. HydraFlex™ Pro is also available in a two-sided, gray version, as well.

## PRODUCT USE

HydraFlex™ Pro HP-Series is an economical solution for many containment applications including durable liners and covers requiring high impact, cold temperature installations, puncture and tear strengths. HP-Series is designed to remain flexible and offer excellent elongation properties to conform to a wide variety of shapes and surfaces in demanding conditions.

HydraFlex™ Pro is engineered with ultra-low modulus characteristics to resist pinholes and flex-cracks during installation. Trouble free installations include proper sub-grade preparation in addition to the appropriate needle punched geotextile for added puncture protection.

## SIZE & PACKAGING

HydraFlex™ Pro HP40 is available in large, one-piece panels, up to 38,000 square foot panels. Pre-fabricated, stepped panels are produced in our quality controlled factory environment; all panels are accordion folded and tightly rolled onto a heavy duty core for ease of handling and time saving installation.



Tank Liner

## PRODUCT

## PART #

HYDRA FLEX™ PRO .....	HP40BD
HYDRA FLEX™ PRO .....	HP40DD

## APPLICATIONS

Above Ground Tanks	Remediation Liners
Containment Liners	Brine Ponds
Canal Linings	Leachate Collection Ponds
Oilfield Pit Liners	Interim Landfill Covers
Decorative Ponds	Outdoor Covers
Fish Hatchery Liners	Farm Ponds

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## HYDRA FLEX™ PRO HP40BD / HP40DD

### PRO-FORMA DATA SHEET

PROPERTIES	TEST METHOD	IMPERIAL		METRIC	
		MINIMUM	TYPICAL	MINIMUM	TYPICAL
APPEARANCE		Black/Gray / Gray/Gray		Black/Gray / Gray/Gray	
THICKNESS, AVERAGE	ASTM D5199	36 Mils	38 Mils	0.91 mm	0.97 mm
WEIGHT		186.7 lbs/msf		912 g/m <sup>2</sup>	
TENSILE STRENGTH AT BREAK	ASTM D6693	152 ppi	208 ppi	266 N/cm	364 N/cm
TENSILE ELONGATION AT BREAK	ASTM D6693	800 %	950 %	800 %	950 %
TEAR RESISTANCE	ASTM D1004	22 lbs	26 lbs	98 N	116 N
PUNCTURE RESISTANCE	ASTM D4833	56lbs	80 lbs	249 N	356 N
STANDARD OIT OR HIGH PRESSURE HPOIT	ASTM D3895 ASTM D5885	100 min 400 min	130 min > 400 min	100 min 400 min	130 min > 400 min
2% SECANT MODULUS (MAXIMUM)	ASTM D5323	60,000 psi Maximum	30,000 psi	414 Mpa Maximum	207 Mpa
HYDRAULIC CONDUCTIVITY		1.9 x 10 <sup>-10</sup> cm/sec			
MAXIMUM STATIC USE TEMPERATURE		180° F		82° C	
MINIMUM STATIC USE TEMPERATURE		-70° F		-57° C	
LOW TEMP BRITTLENESS BY IMPACT	ASTM D1790	-103° F		-75° C	
FACTORY SEAM REQUIREMENTS					
BONDED SEAM STRENGTH	ASTM D6392	65 lbf/in width	87 lbf/in width	289 N/cm width	387 N/cm width
SEAM PEEL ADHESION	ASTM D6392	55 lbf/in width	71 lbf/in width	245 N/cm width	316 N/cm width

PRO-FORMA Sheet Contents: The test values listed in this Pro-Forma data sheet are representative of initial production runs. These values may be revised at anytime without notice as additional test data becomes available.



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data sheets.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at [www.ravenefd.com](http://www.ravenefd.com)

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