



**Extreme impact protection**

Poron XRD is a soft polyurethane foam that instantly turns into a protective shield that absorbs up to 90% of the most intense force, hit after hit.

**FEEL THE INTENSITY OF SPORTS NOT THE IMPACT**

- Absorbs up to 90% of Energy when impacted at high strain rates;
- Instantly dissipates the Energy over a larger area;
- Ability to keep its unique impact performance hit after hit.

**APPLICATIONS**

Poron XRD is used in a variety of applications involving dynamic sports and sport activities:

ski	snowboarding	alpine ski	rugby
bobsleighs	horseback riding	alpine / mountaineering	wakeboarding
trekking	biking	mountain biking	safety shoes
motor biking	roller skating	skateboarding	sailing
hockey	judo	soccer	sky diving
outdoor shoes	hunting	kitesurfing	shin guard





## FEATURES

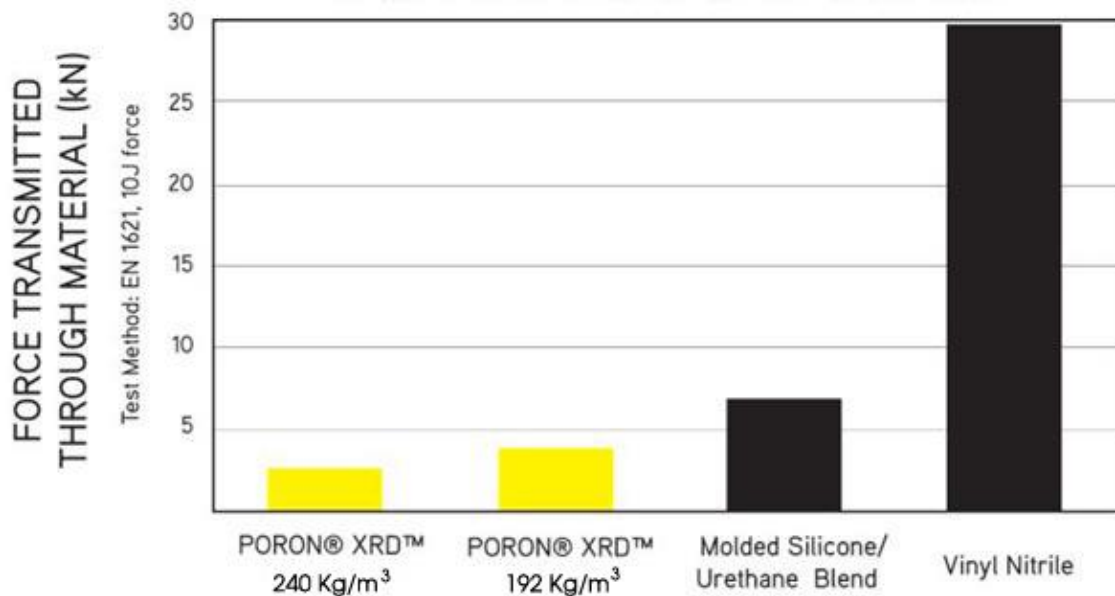
Poron XRD ability to adapt to the applied impact:

- At high strain rates the material instantaneously stiffens to absorb the impact;
- Based on the applied impact the Poron XRD molecules create a unique protective shield able to transmit the force over a larger area to the wearer thus ensuring excellent protection;
- At rest or under low strain rates, Poron XRD Material feels comfortable, allowing a wide range of movement;
- After each impact Poron XRD recaptures its original shape and consistency, remaining comfortable;
- Poron XRD transmits a lower stress to the user compared with other competitors as shown here below.

# PORON® XRD™ Protection Performance Advantage

YOUR CUSTOMERS WILL FEEL THE DIFFERENCE

PORON® XRD™ MATERIALS TRANSMIT LESS FORCE TO THE WEARER THAN OTHER PROTECTIVE FOAMS





## QUALITY PROTECTION

- Poron XRD offers superior impact absorption outperforming the competitors;
- Reliable protection that's engineered to withstand most extreme conditions;
- Repeated impact absorption measured from first to last hit.

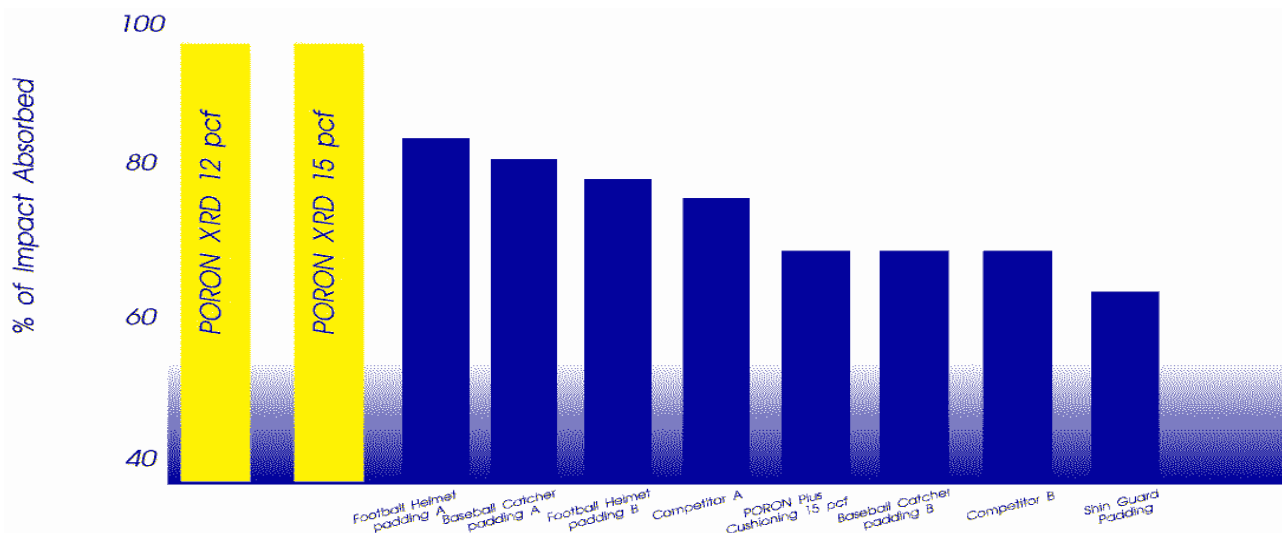
## WEARABLE PROTECTION

Poron XRD, a thin and flexible alternative to traditional padding:

- Soft, comfortable, contouring;
- It is light and flexible;
- It ensures excellent breathability and air flow;
- Design advantage: available in a wide range of weights and thicknesses to meet design requirements.



*Poron XRD* absorbs up to 90% of impact energy performing premium impact performance





**SUPPLY DETAILS**

Poron XRD is supplied in rolls of 16,72 m<sup>2</sup>, width is 137,2 cm.

Available in a wide range of thicknesses and densities to meet the unique requirements.

Currently available the yellow color. White and black colors will be available next.

**STOCK AVAILABILITY**

DENSITY Kg/m3	THICKNESS mm
144	4
144	6
144	9,5
144	12,7
144	16

DENSITY Kg/m3	THICKNESS mm
192	3,2
192	4,3
192	4,3
192	5,2
192	5
192	6,3
192	12,7
192	3,2
192	4,3
192	5,2

DENSITY Kg/m3	THICKNESS mm
240	3,2
240	4,3
240	5,2
240	6,3
240	12,7

DENSITY Kg/m3	THICKNESS mm
320	2
320	3
320	6
400	2
400	3

Availability may be subject to changes.



## TECHNICAL SPECIFICATIONS



### PORON® XRD™ Extreme Impact Protection

PROPERTY	TEST METHOD	PRODUCT				
*Density, lb./ft <sup>3</sup> Specific Gravity Tolerance, % ± 10	ASTM D 3574-95 Test A <i>lb/ft<sup>3</sup></i> <i>kg/m<sup>3</sup></i> <i>peso específico gr.</i>	9	12	15	20	25
		144	192	240	320	400
		0,14	0,19	0,24	0,32	0,40
*Standard Thickness Tolerance, %		See Product Availability ± 10				
Standard Color		65 Vivid Yellow - Black - Off White				
Air Permeability	Internal using Gurley Densometer	Open Cell - Breathable				
*Compression Set, % max.	ASTM D 3574 Test D @ 158°F (70°C)	< 10				
*Compression Force Deflection, psi, kPa)	0.2"/min. Strain Rate Force Measured @ 25% Deflection	1.1 - 3.4 (8 - 23)	1.5 - 5.5 (10 - 38)	4 - 9 (28 - 62)	5 - 12 (34 - 83)	10 - 20 (69 - 138)
Hardness, Durometer	Shore "O"	10	19	32	**	
Hydrolysis Resistance, Compression Set, % Max	ASTM D 3574 Test J / Test D after autoclaved 5 hrs @ 250°F (121°C)	**				
Resilience, Shore Instrument Resiliometer, avg (Ball Rebound Tester)	ASTM D 2632-96, Vertical Rebound	**				
Water Vapor Transfer, Typical g/ft <sup>2</sup> /24hrs (g/m <sup>2</sup> /24hrs)	Sample Thickness, inches (mm)	0.158 (4.0)	0.118 (3.0)	0.118 (3.0)	**	
	Based on ASTM E96-00 Upright / 37°C / 0% RH	4150	3400	3100	**	
	Leakage - Inverted	Yes	Yes	Yes	**	
Water Absorption, % Wt Gain	Based on ASTM D 570 - 2hr water immersion @ room temperature	Typical Value 10				
Skin Contact	Primary Skin Irritation - FHSA. Based on ISO 10993-10 (2002), ISO 10993-12 (2007), ISO/IEC 17025 (2005)	Negligible Irritant. Primary Irritation Index = 0				
Tear Strength, pli, min. (kN/m)	ASTM D 624 Die C	4.5 (0.8)	5 (0.9)	5 (0.9)	10 (1.8)	14 (2.5)
*Tensile Elongation, % min.	ASTM D 3574 Test E	> 145				
*Tensile Strength, psi, min. (kPa)	ASTM D 3574 Test E	30 (207)	45 (310)	70 (483)	100 (689)	140 (965)
Restricted Substances Compliance	Based on Adidas-Salomon policy for control and monitoring of hazardous substances.	Pass				
Chemical Resistance		PORON Cushioning Materials are unaffected by mild organic acids and bases. They show modest swelling with oils and greases and other linear hydrocarbons. Strongly polar solvents will greatly swell PORON Materials. In most cases, physical properties recover to a great extent as the solvents evaporate.				