

### Sine Wave 1158

# HIPS - High Impact Polystyrene (Single use only)

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Properties	Rating	ASTM
IZOD Impact, ftlb/in.	_	
@70°F	2.0	D256
@0°F	1.3	D256
Tensile Strength	3,700 psi	D638
Heat Deflection	188	D695
Vicat Softening	212	D1525
Wt.lb./sq.ft.		
.070 mil	.449	
.090 mil	.577	
.110 mil	.705	
.130 mil	.833	
.150 mil	.966	

#### ABS - Acrylonitrile-Butadiene Styrene (Multiple uses up to 10 times)

(Multiple uses up to 10 tillles)					
<b>Properties</b>		Rating	<b>ASTM</b>		
IZOD Impact, ft.	-lb/in.	-			
. @7	′3°	5.6	D256		
@0	)°	1.9	D256		
Tensile Strength	I	5,300 psi	D638		
Heat Deflection					
@2	264 psi	199	D648		
@6	66 psi	211	D648		
Falling Dart Imp	act, ftlb.				
@7	′3°F	23			
@4	l0°F	14			
Specific Gravity		1.05	D792		
Wt. lb./sq.ft.					
.07	0 mil	.451			
.09	0 mil	.580			
.11	0 mil	.705			
.13	0 mil	.833			
.15	0 mil	.961			

## PE - Polyurethane Elastomer

(Multiple uses up to 40-50 times)

Properties	Rating	ASTM
Shore A Hardness	45-50	D2240
Tear Strength, PLI	55	D624
Tensile Strength, psi	500	D638
Ultimate Elongation	40%	D638

# PPE - Premium Polyurethane Elastomer (Multiple uses up to 100+ times)

Properties	Rating	ASTM
Shore A Hardness	60-65	D2240
Tear Strength, PLI	120	D624
Tensile Strength, psi	1150	D638
Ultimate Elongation	1200%	D638

#### Tolerances @ 70F

(All patterns, all materials)

Standard size: 4'x10'

Length: +1" to 2", -0" (shipped long for field trimming)

Width: ± 1/4"

Thickness: ± 1/16" at edge (except over 1" thick)
Custom size: At customer request, additional charge.



### **Application Summary**

**Reusability** – Single-use HIPS plastic, medium-use ABS plastic, and extended-use PE and PPE elastomeric materials are available for your specific concrete forming application.

**Rate-of-Pour –** Formliners are typically designed to withstand concrete placement of five feet per hour, but there are other materials/methods available if an application exceeds this limit.

#### **Attachment**

Formliners are used in cast-in-place, precast or tilt-up. All mounting surfaces should be clean and dry. ABS and HIP materials can be installed using screws or staples. PE and PPE materials are typically plywood-mounted with adhesive and subsequently bolted to formwork. Adhesive tapes, foam tapes and silicone caulks are used at joints and seams to minimize grout leakage.

#### Alignment

The formwork must be properly aligned and in common planes. A "stack up" of tolerances can result in a noticeable "step" in the finished concrete surface, especially with "shallow" formliner patterns. Reveals or rustications are recommended at joints to simplify forming, accentuate the texture and reduce grout leakage.

#### Form Release

Formliners should be sprayed with a premium form release before each use and within the same day concrete is placed. Form release should be applied with a low-flow, wide-angle, flat-spray nozzle and wipe with a cloth to insure an evenly-coated formliner surface. Formliners should always be covered when not in use.