

PHYSICAL PROPERTIES OF RIGID CELLULAR POLYSTYRENE

ASTM C 578-18 Standards

GALAXY GRADES	GPS 15	GPS 18	GPS 22	GPS 29	GPS 38	GPS 48	GPS 60
ASTM C 578-18	TYPE XI	TYPE I	TYPE VIII	TYPE II	TYPE IX	TYPE XIV	TYPE XV
BS 3837	LD	SD	HD	EHD	UHD	SHD	XD
APERANT DENSITY [Kg/m ³]	12	15	18	22	29	38	48
APERANT DENSITY RANGE [Kg/m ³]	(12-15)	(15-18)	(18-22)	(22-29)	(29-38)	(38-48)	(48-60)
COMPRESSIVE RESISTANCE [KPa] Minimum, @Yield or 10 % deformation, which occurs first	35	69	90	104	173	276	414
THERMAL RESISTANCE [K.m ² /W] @ mean temp. of @ 35°C & 60% RH min,	0.53	0.60	0.64	0.67	0.71	0.71	0.73
THERMAL CONDUCTIVITY [W/m. k] Max @ 35°C and 60% RH,	0.0482	0.0419	0.0394	0.0377	0.0356	0.0356	0.0347
FLEXURAL STRENGTH [KPa] Minimum,	70	173	208	240	345	414	517
WATER VAPOR PERMEANCE [g/m ² /24 hr in metric] Maximum , Perm	5.0	5.0	3.5	3.5	2.5	2.5	2.5
WATER ABSORPTION [by total immersion] Maximum, Volume %	4.0	4.0	3.0	3.0	2.0	2.0	2.0
DIMENSIONAL STABILITY [change in dimension] Maximum %	2.0	2.0	2.0	2.0	2.0	2.0	2.0
OXYGEN INDEX [FiO ₂] Minimum, Volume %	24	24	24	24	24	24	24
FLAME SPREAD INDEX [feet/min] UL-723	25	25	25	25	25	25	25
SMOKE DEVELOPMENT INDEX SDI UL-723	450	450	450	450	450	450	450