

# DENKA STYROL

## GPPS (General Purpose Polystyrene)

### Summary

DENKA STYROL is the General Purpose Polystyrene which balances high strength and excellent forming. Especially the series of MW-1 is the Ultra Strong Polystyrene who breaks the traditional common sense "Hard but Fragile" of GPPS. With the excellent mold release in injection field and excellent processes in extrusion field, DENKA STYROL is used for wide range of products all over the world.



Diffusion Sheet



Food Packaging

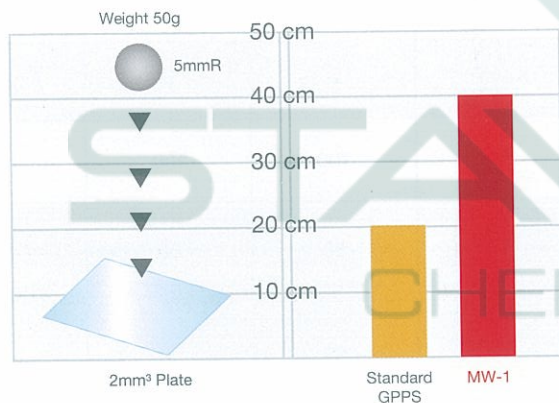


### Characteristics

#### MW-1-301 / MW-1-321 ~ Ultra High Molecular Weight

- ▶ Ultra High Impact Strength
- ▶ FDA Approval Grade (MW-1-321)
- ▶ Replacement of SAN
- ▶ Suitable for Injection Mold Process

#### "Falling Weight Strength"



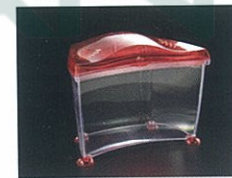
Refrigerator tray



Crisper Box



Egg Case



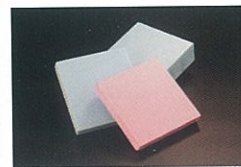
Aquarium

#### MF-21-301 / MF-21-321 ~ Multi Purpose

- ▶ Standard Grade in DENKA STYROL line up
- ▶ It is used for various kinds of products
- ▶ FDA Approval Grade (MF-21-321)



Stationary



Insulation Board (XPS)



Cutlery

#### HRM-2S-311 ~ Heat Resistant / Suitable for Sheet Application

- ▶ Good Heat Resistant
- ▶ FDA Approval Grade
- ▶ Stable Extrusion and Enough Strength with High Molecular



Food Packaging (PSP)

# DENKA STYROL

## (General Properties)

Properties	Methods	Conditions	Units	MW-1-301	MW-1-321	MF-21-301	MF-21-321	HRM-2S-311
				High Strength		High Flow High Heat		High Heat
Color	-	-	-	Bluish	Crystal	Bluish	Crystal	Non-Blue
Total Luminous Transmittance	ISO 13468-1 (JIS K7361)	2mmt	%	90	90	90	90	90
Haze	ISO 14782 (JIS K7136)	2mmt	%	0.3	0.3	0.3	0.3	0.3
MFR	ISO 1133 (JIS K7210)	200°C, 49N	g/10min	1.8	1.8	4.5	4.5	1.8
Tensile Stress	ISO 527-1.2 (JIS K7161)	5mm/min	MPa	47	47	47	47	50
Tensile Strain at Break			%	<3	<3	<3	<3	<3
Flexural Stress	ISO 178 (JIS K7171)	2mm/min	MPa	102	102	107	107	109
Flexural Modulus			MPa	3,300	3,300	3,350	3,350	3,400
Charpy Impact Strength	ISO 179 (JIS K7111)	Notched, 23°C	KJ/m <sup>2</sup>	2.8	2.8	2.2	2.2	2.6
Vicat Softening Temperature	ISO 1133 (JIS K7210)	50N	°C	93	93	99	99	102
Deflection Temperature Under Load	ISO 75-1.2 (JIS K7191-1.2)	Flat wise 1.8MPa	°C	74	74	78	78	81
Density	ISO 1183 (JIS K7112)	23°C	Kg/m <sup>3</sup>	1,040	1,040	1,040	1,040	1,040
Rockwell Hardness	ISO 2039-2 (JIS K7202)	23°C	M scale	75	75	75	75	75
Flammability	UL94 (UL File No. E49895)			HB	HB	HB	HB	HB
FDA 21CF177.140 Regulation*				-	√	-	√	√
Japan Hygienic Olefin and Styrene Plastic Association Regulation*				√	√	√	√	√

\* Please contact us for details information.