

Technical Data Sheet

Type: Stat-Rite® S-1112M is an *Inherently Dissipative Polymer (IDP)* masterbatch specifically developed to impart permanent static dissipative properties to polyethylene resins. Stat-Rite® S-1112M uses Lubrizol's proprietary Stat-Rite® IDP technology to provide permanent static dissipative protection. Blends of Stat-Rite® S-1112M with PE resins are injection moldable or can be extruded into the desired products. Typical loading of 20-35% will impart surface resistance of 10⁹ - 10¹¹ ohms to the final products.

Applications: Cleanroom components for packaging and cleaning, tote bins, part trays, tubing, sheet for thermoforming and prototyping

Physical Properties	S-1112M	Unit	Test Method
Hardness (5 sec)	45	Shore D	ASTM D-2240
Specific Gravity	0.982		ASTM D-792
Ultimate Tensile Strength	2400	psi	ASTM D-412
Ultimate Elongation	670	%	ASTM D-412
Stress at 100% Strain	1170	%	ASTM D-412
Stress at 300% Strain	1240	psi	ASTM D-412
Graves Tear	381	lb/in	ASTM D-624
Taber Loss (1000 rev)	131	mg	ASTM 3389
Melting Temperature	150	°C	Lubrizol Method
Crystallization Temperature	115	°C	Lubrizol Method
Electrical Properties			
Surface Resistance	5.3 x 10 ⁹	Ω	ANSI/ESD S11.11
Volume Resistance	4.2 x 10 ⁹	Ω	ANSI/ESD S11.12

- Application Information: Properties of a 65/35 blend of LDPR with StatRite® S-1112M
- Prior to testing, samples were conditioned at 23°C for 48 hours
- Based on extruded sheet (30 mils)
- Listed values are "typical (average) values" and should/cannot be applied for specification purposes

Supply Form and Standard Packaging

- Stat-Rite® S-1112M is supplied in pellet form and packaged in 50lb. bags or 1,000lb. boxes.

Material Preparation

- Prior to processing, Stat-Rite® S-1112M must be dried at 180°F (82°C) for 4-6 hours or overnight at 150°F (66°C)
- It is recommended to dry the material in a desiccant type dryer. Target dew point should be -40°C.
- Depending on the applied processing technique, the maximum moisture level should be 0.02%

Handling Considerations

- Stat-Rite® S-1112M can be processed on any conventional extruder or injection molding machine.

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Recommended Extrusion Starting Conditions Based on 35% StatRite® S-1112M:

Extrusion	°F/°C
Zone 1	370/188
Zone 2	380/193
Zone 3	390/199
Zone 4	390/199
Adapter (5)	390/199
Die Zone 1 (6)	390/199
Die Zone 2	390/199

Melt Temp. Mid-Range: 390°F/199°C
Screen Pack Recommendation: 20/40/80/20

For further information refer to Lubrizol Advanced Materials processing guides.

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