



Polystyrene Particle Foam for Molding

1 Scope

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose/Material Description. The foam produced for the particle foam will be molded into parts used in the interior of the vehicle.

1.2 Symbols. Expanded Polystyrene (EPS).

1.3 Applicability. The EPS foam specified in this specification has the molding applicability for parts used underneath the carpet as fillers.

1.4 Remarks.

1.4.1 Recycled or Alternate Materials. Recycled polystyrene materials may be used for parts under this specification. Prior to incorporating recycled into a finished product, the supplier shall provide data showing that no decrease in performance will occur.

2 References

Note: Only the latest approved standards are applicable unless otherwise specified.

2.1 External Standards/Specifications.

ISO 844	ISO 845	ISO 1926
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2.2 GM Standards/Specifications.

GMW3059	GMW3221	GMW14270	GMW15634
GMW3205	GMW3232	GMW14444	GMW16853

2.3 Additional References. Not applicable.

3 Requirements

Unless otherwise stated, the test shall be applicable for all types.

3.1 Requirements on Test Specimens.

3.1.1 Required Property Values for Documentation. All requirements listed in Table 1 shall be fulfilled by the delivered foam and shall be documented by the supplier in a construction data sheet. Documentation of the additional properties in this construction data sheet may be required by the approving region.

3.2 Emissions Testing of Interior Materials and Parts. For all Code E designated parts per GMW14444, reference GMW16853 for emissions testing of interior materials and parts.

3.3 Test Requirements.

3.3.1 Test specimens shall be obtained from molded parts or molded foam test buns. These test specimens shall be cut at a minimum of 10 mm below the molded surface of the sample.

3.3.2 Conditioning. All test pieces shall be conditioned to GMW3221, Code A.

3.3.3 All requirements listed in Table 1 shall be tested by the foam manufacturer and results submitted to GM Materials Engineering.

Table 1: Requirements for Polystyrene Particle Foam

Property	Test Method	Unit	Specified Value				
			Type 1	Type 2	Type 3	Type 4	Type Z Note 1
Density	ISO 845	kg/m ³	20 ± 5	30 ± 5	40 ± 5	60 ± 5	Per Drawing
Compressive Strength at 10% Deformation	ISO 844	kPa	≥ 100	≥ 120	≥ 250	≥ 450	Per Drawing
Tensile Strength	ISO 1926	kPa	N/A	≥ 250	≥ 450	N/A	Per Drawing
Odor	GMW3205 Code A and B		≥ 6				
Fogging	GMW16853-B-Y1-T1	mg	≤ 2				
Emissions • Volatile Organic Compound (VOC) • Semi-Volatile Organic Compound (SVOC)	GMW15634	µg/g	VOC: ≤ 100 SVOC: ≤ 250				
Flammability • As Received • Aged	GMW3232	mm/min	Must comply with GMW3232 requirements: Burn Rate and B _{STAT}				

Note 1: Type Z. Polystyrene particle foam which does not fit in the other types. Specific Values to be documented on the Certification Data Form.

Note: B_{STAT} = Statistical Burn Rate, N/A = Not applicable.

3.4 All materials supplied to this standard must comply with GMW3059, **Restricted and Reportable Substances**, including the requirement to obtain a GM-approved International Material Data System (IMDS) submission.

4 Manufacturing Process

Not applicable.