



Polyolefin Foams for General Applications - Non-crosslinked and Crosslinked

1 Scope

1.1 Material Description. This specification identifies polyolefin foam types, non-crosslinked or crosslinked (physically or chemically), for molded and stamped parts. These foams are not recommended for areas where temperatures exceed +100 °C. These foams are not recommended for under hood use.

1.2 Symbols. >PP-E< or >PE-E< or >PE-E< crosslinked.

1.3 Applicability. This specification shall encompass polyolefin foams used in all applications throughout the vehicle. These foams may be used for vibration damping, isolation, spacers for part retention, and air and dust seals.

Note: For polyurethane (PUR) foams for general applications, see GMW14196, GMW15061 and GMW15058.

1.3.1 Types. Products qualified to this specification shall be identified by density to ISO 845 and compression load deflection at 10% deformation to ISO 844 according to Table 2.

1.3.2 Type Z. Polyolefin foam which does not fit in the other Types. Specific Values to be documented in the submitted Certification Data.

1.4 Remarks. Not applicable.

2 References

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

2.1 External Standards/Specifications.

CMVSS 302	ISO 844	ISO 1798	ISO 1923
FMVSS 302	ISO 845	ISO 1856-B	ISO 2796

2.2 GM Standards/Specifications.

GMW3059	GMW3235	GMW14444	GMW16853
GMW3205	GMW3259	GMW15058	
GMW3221	GMW14196	GMW15061	
GMW3232	GMW14270	GMW15634	

2.3 Additional References. None.

3 Requirements

3.1 Requirements on Test Specimens.

3.1.1 Test Piece and Number. If it is not possible to take test pieces from part, then suitable plates shall be manufactured for the test (taken from equal manufacturing process, recipe of foam and density). The test piece shall be taken without skin and in rising direction of foam.

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

3.1.3 Required Performance Values. All requirements listed in Table 1 shall be fulfilled by the delivered foam and shall be documented by the supplier in the submitted Certification Data.

3.1.4 Basic Foam Physical Properties. The density and compression load deflection at 10%, according to the foam type and listed in Table 2 respectively, shall be fulfilled by the delivered foam and shall be documented by the supplier in the submitted Certification Data. All physical properties indicated in Table 3 shall be documented

in the submitted Certification Data, and may be noted on the drawing and/or in the math data for production quality check purposes. Values indicated with "Not applicable" ("N/A") are not required. Documentation of additional properties 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.

Table 1: Required Performance Values for Documentation Note 1, Note 2

Performance	Test Method	Specified Value
Fogging Note 1	GMW3235, Method B-Y1-T1 (gravimetric, ≥ 1 day predrying, +90 °C test temperature)	≤ 4 mg
Flammability	GMW3232	At minimum, must comply to CMVSS 302/FMVSS 302
Interior Emissions Note 1	GMW15634	Volatile Organic Compound (VOC) ≤ 600 $\mu\text{g/g}$ Semi-Volatile Organic Compound (SVOC) ≤ 1000 $\mu\text{g/g}$
Resistance to Odor Note 1	GMW3205	
	Wet Condition (Code A)	Rating 6 minimum
	Wet Condition (Code B)	Rating 6 minimum
Mildew Note 2	GMW3259	No mildew
Thickness	ISO 1923	Per engineering drawing with tolerances
Dimensional Stability	ISO 2796 at +90 °C for 24 h Dimensional Change	Per engineering drawing with tolerances

Note 1: Required for all parts that are in contact with refreshable air in the occupant compartment and the trunk.

Note 2: Required only if natural fibers are present in the construction.