



Waterborne, High Bake, Sprayable Damper, High Performance

1 Scope

This specification details the requirements of a waterborne, high bake, sprayable sound damper material with high acoustic performance. The material is applied in the paint shop after E-Coat bake, before primer surfacer. This material is intended to improve the acoustic sound performance of GM vehicles by damping metal vibration. This material is **not** intended for use in areas of the vehicle where appearance performance is required but must have compatibility with production primer surfacer and topcoat systems to the extent that it will not inhibit the cure of paint overspray.

1.1 Material Description. The material must be a smooth and homogeneous mixture that is free of air, lumps, unmixed particles or foreign materials. It must be capable of being dispensed with approved and validated production displacement pumping and robotic application equipment, including multi-streaming applicators (MSA) and airless applicators. It must not have a noxious or toxic odor in either the uncured or cured state. In addition, the material must not adversely affect the personnel handling it.

1.1.1 The material must adhere to all approved production E-Coat substrates. It must have good durability and not accelerate the rusting of steel over which it is applied.

1.2 Symbols. Not applicable.

1.3 Applicability. On vehicle interior surfaces to stop metal vibration. Applied in Paint Shop over e-coated metal.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3059

GMW3221

GMW6725

2.3 Additional References.

TMC003 Material Safety Data Sheet guidance documents (available at www.gmsupplypower.com).

3 Requirements

3.1 Requirements on Test Specimens. All samples are to be conditioned prior to each required test to GMW3221, Code. D.

3.2 Emissions Testing of Interior Materials and Parts. Not applicable.

3.3 Performance Requirements. All performance requirements are detailed in GMW6725.

3.4 Production Part Approval Process (PPAP). In addition to the requirements previously detailed, all new material must comply with and meet all PPAP documentation requirements including, but not limited to, Product and Process-specific Design Matrix, Design Failure Mode & Effects Analysis (DFMEA), Process Failure Mode & Effects Analysis (PFMEA), Key Product Characteristic (KPC), Key Control Characteristic (KCC), Process Flow and Control Plan, Formulation Footprint, Process Capability Study and Measurement Systems Analysis.

3.4.1 Detailed technology-specific bake charts must be developed and submitted to the appropriate GM Paint Engineer for approval.

4 Manufacturing Process

Not applicable.

5 Rules and Regulations

5.1 Legal Regulations. All materials must satisfy applicable laws, rules, regulations and recommendations valid in the country of usage.

5.2 Language. In the event of conflict between the English and domestic language, the English language shall take precedence.

5.3 Source Shipment Responsibility. It will be the responsibility of the supplier to ensure that the material is not exposed to temperatures during shipment which would cause the material to fail to meet any of the requirements of this specification.

5.4 Inspection and Rejection. All shipments of materials or parts under contract or purchase order manufactured to this specification shall be equivalent in every respect to the initial samples approved by GM Engineering. There shall be no changes in formulation or manufacturing process permitted without prior notification and approval by GM Paint & Polymers Engineering. Lack of notification by the supplier constitutes grounds for rejection of any shipment. While samples may be taken from incoming shipments and checked for conformance to this specification, the supplier shall accept the responsibility for incoming shipments meeting this specification without dependence upon purchaser's inspection. In addition, the supplier shall be responsible for submitting a Certificate of Analysis with each batch of material arriving at a plant. This document shall be prepared and provide the data for Key Product Characteristics of this material as defined in GMW6725.

5.5 Material Safety Data Sheets/Safety Data Sheets (MSDS/SDS). For new product submissions, or when a change in chemical composition of an existing product has occurred, a complete copy of the Material Safety Data Sheet/Safety Data Sheet must be submitted in compliance with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) requirements or other country-specific MSDS/SDS requirements. In addition, product MSDS/SDS submissions must be in compliance with specific country General Motors TMC003 Material Safety Data Sheet/Safety Data Sheet guidance documents where available.

5.6 All materials supplied to this standard must comply with the requirements of GMW3059, Restricted and Reportable Substances for Parts.

6 Approved Sources

Materials supplied to this specification must be approved by General Motors.

The appropriate GM Materials Engineering Department (Product Engineering or Manufacturing Engineering) must confirm materials as meeting the requirements of this specification. Only materials/sources listed in the GM Materials File (MATSPC) under this standard number have been qualified by Engineering as meeting the requirements of this standard.

7 Notes

7.1 Glossary.

MATSPC: Global repository of GM approved materials for corresponding GM Engineering Standards.

7.2 Acronyms, Abbreviations, and Symbols.

DFMEA	Design Failure Mode & Effects Analysis
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
KCC	Key Control Characteristic
KPC	Key Product Characteristic
MSA	Multi-streaming Applicator
MSDS	Material Safety Data Sheet
PFMEA	Process Failure Mode & Effects Analysis
PPAP	Production Part Approval Process
SDS	Safety Data Sheet