



Sealer – Pumpable, High Bake, High Flow Roof Ditch

1 Scope

This specification details the requirements of a paintable, high bake, high flow sealer that is applied in the paint shop after Electrodeposition Primer (ELPO) bake, and must be capable of robotic application. It must be compatible with production primer surfacer and topcoats systems and exhibit excellent paint appearance and durability, equivalent to the performance of Class 1 exterior topcoat systems.

1.1 Material Description. The material must be a smooth and homogeneous mixture free of air, lumps, unmixed particles or foreign materials. It must be capable of being dispensed with standard production pumping and spraying equipment. It must not have a toxic or noxious odor in either the uncured or cured state. In addition, it must not adversely affect those personnel handling it.

1.1.1 The material must adhere to all production Electrocoat (E-Coat) substrates. It must have good durability and not accelerate the corrosion of substrate to which it is applied.

1.2 Symbols. Not applicable.

1.3 Applicability. The material is intended for application to the exterior roof joint, without a subsequent molding, so it must provide an extremely smooth seamless appearance.

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

GMW15979

2.3 Additional References.

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

3 Requirements

3.1 Material Testing and Validation. The material must be tested and validated to the requirements of GMW15979.

3.2 Health and Environmental Review. Each material will be reviewed for health and environmental impact by the health and environmental groups from each country.

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

3.4 Performance Requirements. All performance requirements for this material will be found in GMW15979.

3.5 Production Part Approval Process (PPAP) Requirements. In addition to the requirements detailed in 3.1 through 3.3, 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 and Effects Analysis (DFMEA), Product Failure Mode and 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.

3.5.1 Supplier must develop detailed, specific bake charts. These bake charts must be submitted to the appropriate GM Paint Engineer for approval and signature.

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 GMW15979.

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 and Effects Analysis
E-Coat	Electrocoat
ELPO	Electrodeposition Primer
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
KCC	Key Control Characteristic
KPC	Key Product Characteristic
MEVS	Manufacturing Engineering Vehicle Systems
MSDS	Material Safety Data Sheet
PFMEA	Product Failure Mode and Effects Analysis