GM ENGINEERING STANDARDS	Material Specification	9986582

Primer Surfacer - Waterborne - High Bake

1 Scope

This specification covers the qualification and performance requirements of a thermosetting, sandable, waterborne primer surfacer.

1.1 Material Description. The primer surfacer covered in this specification is intended to be applied and baked over electrodeposition (ELPO, E-Coat, Electrocoat) primer prior to topcoat. The nominal bake for this system is 20 minutes at 165 °C (330 °F) substrate temperature.

1.2 Symbols. Not applicable.

1.3 Applicability. The primer surfacer is intended to provide a smooth, adhesion promoting coating over baked ELPO primer. It is also intended to provide an easily sanded surface.

1.4 Remarks. The primer surfacer is typically applied by electrostatic spraying and is subsequently topcoated with either solventborne or waterborne basecoats combined with the appropriate clearcoat technology.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3002	GMW3059	GMW14270	GMW17405

2.3 Additional References. None.

3 Requirements

Individual material sources may differ in their physical or chemical properties. Upon submission, all material properties, system performance and system processing properties shall be established and documented. The percent volume non-volatiles must not exceed ± 1.5% of the established baseline. The percent volume non-volatile data will be acquired from the Certificate of Analysis (COA) as outlined in GMW17405. Such properties shall form the basis of all subsequent lots.

3.1 Requirements on Test Specimens. Materials approved to this specification must meet all the material, performance, and processing requirements of GMW3002. Only exceptions or requirements specific to this type of material are noted herein. The primer must be evaluated for plant-specific material layering and processing before release for production use.

3.1.1 Film Thickness. Materials approved to this specification must meet all specified appearance and durability requirements within the following film ranges:

- Interior Primers: 15 µm to 30 µm (0.6 mil to 1.2 mil)
- Exterior Primers: 18 µm to 40 µm (0.7 mil to 1.4 mil)

Note: mil = one thousandth of an inch.

3.1.2 Bake. Products that are approved to this specification have a typical bake range of 160 °C to 182 °C (315 °F to 360 °F). Time at substrate temperature typically ranges from 15 minutes to 90 minutes. Refer to the approving GM engineer for additional information regarding exceptions to the typical processing bake temperature and time ranges.

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3.1.3 Bake Window. Must be developed as specified in GMW3002 to define technology limits for each product. Once developed, the bake window must be approved and signed by the appropriate Manufacturing Engineering (ME) Vehicle Systems (VS) Paint Materials Engineer and it is the only acceptable document defining cure.

3.1.4 Melt-in. The material must be able to melt-in with wet-on-wet materials. The overspray cannot telegraph or have read-through to the topcoat.

3.1.5 Color. The color match, color standards, and color panels must be approved by the responsible GM engineer.

3.2 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

All shipments of material or parts under contract or purchase order manufactured to this specification shall be equivalent in every respect to the initial samples approved by engineering. There shall be no changes in either formulation or manufacturing processes permitted without prior notification and approval by 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 COA with each batch of material arriving at a plant.

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 Inspection and Rejection. Samples of components or materials released to a GM material specification shall be tested for conformity with the requirements of this material specification and approved by the responsible Engineering department prior to commencement of delivery of bulk supplies.

A new approval must be received for any changes, e.g., properties, manufacturing process, location of manufacture, etc. If not otherwise agreed, all testing and documentation normally required for initial release must be completed.

It is the responsibility of the supplier to inform the customer in a timely manner, without solicitation, and to include documentation of all modifications of materials and/or processes and to apply for a new release.

5.4 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.

6 Approved Sources

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

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 Approved Source List under this standard number have been qualified by Engineering as meeting the requirements of this standard.

Engineering qualifications of an approved source are required for this standard. Only sources listed in the GM Materials File (i.e., GM SupplyPower) under this standard number have been qualified by engineering as meeting the requirements of this standard. To access this list, reference GMW14270 for latest location.

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