



Two Component Clearcoat for Waterborne or Solventborne Basecoats

1 Scope

This specification covers the qualification and performance requirements of two (2) component, high solids (> 50% volume solids as sprayed), solventborne etch resistant clearcoat, used wet-on-wet over waterborne or solventborne basecoat (BC) technology.

1.1 Material Description. Each combination of specific basecoat and clearcoat must be tested and approved as a basecoat/clearcoat topcoat system. The individual components are not interchangeable. In addition, the topcoat system is part of the total coating system and must meet the requirements as outlined in GMW3005, those set forth in this specification, and on the engineering drawings. Validation testing for plant specific layering, ancillary materials, and processing must be conducted prior to release.

1.2 Symbols. Not applicable.

1.3 Applicability. These topcoats are designed to be applied over a baked primer.

1.4 Remarks. None.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3005

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 meet the performance specifications as outlined by the responsible engineer. The percent volume non-volatiles must not exceed $\pm 1.5\%$ 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.

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 Certificate of Analysis 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.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

BC	Basecoat
COA	Certificate of Analysis
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GMVO	General Motors Vehicle Operations
IMDS	International Material Data System
MSDS	Material Safety Data Sheet
SDS	Safety Data Sheet

8 Coding System

This standard shall be referenced in other documents, drawings, etc., as follows:

Material per 9984515