



Resist Coatings For Chrome Plated Plastics

1 Scope

1.1 Material Description. This specification covers the requirements of resist coatings used on chrome plated plastics.

1.2 Symbols. Not applicable.

1.3 Applicability. Resist coatings are special paints applied to selected areas of parts to prevent metal deposition during the chrome plating (copper-nickel-chrome plating) process. These areas may be left with the resist coat as the final finish (in the case of isolation of backside attachment features) or subsequently topcoated with decorative paint to meet color, gloss, and durability requirements.

1.4 Remarks. Not applicable.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

9984801	GMW14270	GMW14797	GMW15581
GMW3059	GMW14668	GMW15572	GMW15777

2.3 Additional References.

None.

3 Requirements

Resist coatings shall meet the following requirements for engineering approval.

3.1 Test Samples. Test samples shall be plaques or parts that are injection molded from chrome plating grade Acrylonitrile Butadiene Styrene (ABS) (GMW15572P-ABS-T5) or ABS+Polycarbonate (PC) (GMW15581P-ABS+PC-T7), partially painted with resist coating, and then chrome plated according to GMW14668.

3.2 Surface Preparation. None if parts are clean. Soiled parts shall be solvent wiped or power washed per 9984801. Report surface preparation used.

3.3 Application. Reduce and apply uniformly to achieve normal recommended dry film thickness. Report reducing solvents, reduction ratios, and dry film thickness.

Caution: Some polymers are sensitive to certain solvents to the extent that substrate failure could occur. Consult with the resin supplier and paint manufacturer for correct selection of reducing solvent.

3.4 Bake. Bake the resist coat using normal recommended time and temperature. Report surface temperatures recorded during baking.

3.5 Appearance. After passing through the chrome plated process, resist coated areas must be free of plating and meet the requirements of GMW15777 both before and after subsequent topcoat application.

3.6 Performance. Resist coated areas shall meet the performance requirements of GMW14797; Table A1, Vehicle Testing Complete (VTC) column. Test with and without topcoat (one color, nominal film build and bake).

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 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.

5.5 All materials supplied to this standard must comply with the requirements of the International Material Data System (IMDS) and GMW3059, **Restricted and Reportable Substances**.

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 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.

For other GM locations, the responsible engineering group should be contacted to obtain the approved source in that individual country.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

ABS	Acrylonitrile Butadiene Styrene
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IMDS	International Material Data System
MSDS	Material Safety Data Sheet
PC	Polycarbonate
PPAP	Production Part Approval Process
SDS	Safety Data Sheet
VTC	Vehicle Testing Complete

8 Coding System

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

Material per 9984255