



Primer, Clear, Polyurethane Adhesive to Plastic Trim

1 Scope

This specification covers an adhesive trim primer used in conjunction with a cleaner to insure the application substrate is contamination free. The approved primer is, in general, used in conjunction with a polyurethane adhesive sealing compound.

1.1 Material Description. This material is a clear, solvent based primer used to condition and promote adhesion to plastic automotive substrates, Polypropylene (PP) or Ethylene Propylene Diene Monomer plus Polypropylene (EPDM+PP) for bonding with fixed glass Polyurethane adhesives. It is applied following application of a cleaner, e.g., Heptane.

1.2 Symbols. Not applicable.

1.3 Applicability. Materials approved to this specification are intended for use in bonding adhesive to plastic automotive trim such as PP wheel liners.

2 References

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

2.1 External Standards/Specifications.

ASTM D1475 ASTM D2834

2.2 GM Standards/Specifications.

GMW3041	GMW3221	GMW3371	GMW15735
GMW3059	GMW3368	GMW14444	GMW16853

2.3 Additional References.

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

3 Requirements

3.1 Sample Conditioning. All samples are to be conditioned prior to each requirement test to GMW3221, Code A.

3.2 Emissions Testing of Interior Materials and Parts. For all Code E designated parts per GMW14444, reference GMW16853 for emissions testing of interior materials and parts.

3.3 Physical Requirements. See Table 1 for Material Properties.

Table 1: Material Properties

Properties	Test Values	Test Methods
Color	Clear	Visual
Density	0.83 g/cm ³ to 0.93 g/cm ³	ASTM D1475
Solids Content	7.4% to 8.4%	ASTM D2834

3.3.1 Materials approved to this specification shall meet the bonding requirements of Shear Adhesion of GMW3371 and Quick Knife Adhesion of GMW3368 as specified in GMW3041. The GMNA adhesive sealing compound will be agreed to by the approving GM Engineering Group and the approved material supplier.

3.3.1.1 Material Stability, GMW15735. The requirements of 9986406 must be met after the following environments:

3.3.1.2 Elevated Temperatures: 72 h at 50 °C ± 2 °C.

3.3.1.3 Low Temperatures. Three (3) cycles of 17 h at -30 °C ± 3 °C, 7 h at 2 °C ± 3 °C and 50% ± 5% relative humidity (RH).

3.3.1.4 Shelf Life Storage Stability: 180 days minimum at 35 °C ± 3 °C and 50% ± 5% RH. Shelf life of the material shall commence upon receipt from the manufacturer.

4 Manufacturing Process

4.1 Materials approved to this specification must be capable of being dispensed and processed with standard GM production equipment.

4.2 Film Thickness. Per manufacturer's process standard requirements.

4.3 Primed Surface. Primed surface must be kept clean at all times in preparation of the polyurethane adhesive application. As necessary, the primed surface may be wiped with a clean, low lint, paint shop quality rag dampened with Heptane.

4.4 Open Time. Substrate trim primed with 9986406 has an open time of 30 minutes from the time of application. If the primed trim has not been used within 30 minutes, it must be wiped as described in 4.3 and reprimed. Only one (1) reprime is allowed.

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. 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.

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