GM ENGINEERING STANDARDS	Material Specification	9986073

Adhesive, Two-Part, Urethane, Resin

1 Scope

This specification covers the resin component, one (1) part of a two (2) part adhesive for primerless bonding of fiber reinforced plastic (FRP) panels or Sheet Molded Composite (SMC) to FRP, primed steel or primed aluminum.

1.1 Material Description. The adhesive system is comprised of a resin component 9986073 and a hardener component 9986129. The mixture of 9986073 and 9986129 is identified as 9986130.

1.1.1 This system must be capable of being metered, mixed and dispensed with current production equipment. It shall be compatible with production paint systems and cannot be adversely affected by paint oven temperatures reaching 130 °C.

1.2 Symbols. Not applicable.

1.3 Applicability. This standard applies only to the resin component of the two-part adhesive system.

1.4 Remarks. The standard number is also used as the GM part number for this material.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

9986129	GMW3059	GMW14270	GMW18077
9986130			

2.3 Additional References. None.

3 Requirements

3.1 Materials approved to this standard shall meet the requirements stated in GMW18077.

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

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.

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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).

A list of approved materials can be found in the GM Materials Approved Source List. To access this list, reference GMW14270 for latest location. This GM material file is provided to third parties to reduce redundant testing of materials. If an approved material is used, the part supplier can use the GM material file reference for Production Part Approval Process (PPAP) material approval. If the decision is made to use a not yet approved material, contact GM Materials Engineering for details on the approval process. The material approval process must be completed prior to PPAP start date of the part supplied to General Motors.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

FRP	Fiber Reinforced Plastic
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GSSLT	Global Subsystem Leadership Team
IMDS	International Material Data System
MSDS	Material Safety Data Sheet
PPAP	Production Part Approval Process
SDS	Safety Data Sheet
SMC	Sheet Molding Composite

8 Coding System

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

Material per 9986073

9 Release and Revisions

This standard was originated in July 1994. It was first approved by the Adhesives TDG in November 1996. It was first published in November 1996.

Issue	Publication Date	Description (Organization)
1	NOV 1996	Initial publication.
2	MAR 2019	Revised to current template. (Materials – Adhesives Global Subsystem Leadership Team (GSSLT))

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