



Standard Requirements - Plastics

1 Scope

This standard provides the additional information for specifications to satisfy GM requirements for plastic materials and parts.

1.1 Material Description. The molding compound shall be identified by the specification code, the manufacturer's identification code and lot number, along with any additional vehicle group and component division requirements.

1.2 Symbols. Not applicable.

1.3 Applicability. Available for use on any plastic injection molded part.

1.4 Remarks. The specification is intended to reduce multiple entries of same information in math files.

2 References

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

2.1 External Standards/Specifications.

FMVSS 302	ISO 1043-2	ISO 11469	TRIAS 48
ISO 1043-1			

2.2 GM Standards/Specifications.

GMW3013	GMW3221	GMW14444	GMW14797
GMW3059	GMW3232	GMW14650	GMW16853
GMW3116			

2.3 Additional References.

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

3 Requirements

3.1 Requirements on Test Specimens. Reference GMW3221.

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 Additional Characteristics. Materials certified to this material specification may have additional characteristics, e.g., paintable, elastomer modified, etc. Possible additional characteristics are defined in GMW3013.

3.4 Test Procedures. Tests shall be conducted using the latest issue of the test methods indicated. Suitable precautions should be taken to ensure that applicable safe limits are not exceeded when conducting test procedures, processes, and/or handling the materials required by this specification.

3.5 Marking of Parts.

3.5.1 For the labeling and identification of vehicle plastic components and materials having a weight of more than 100 g.

3.5.2 Marking is required on all plastic parts except in cases where fit, function, or appearance is compromised. Extruded parts are also excluded from this requirement. Omission requires GM approval.

3.5.3 Mark per GMW3116. Legible plastic compound identification symbol per ISO 11469, ISO 1043-1 and/or ISO 1043-2 must appear on surface, raised or depressed 0.3 mm to 0.4 mm and must not affect appearance, function, or assembly.

3.5.4 A molded part that is manufactured using more than one polymer type shall have the plastic symbols for each polymer type identified on the part. Examples of manufacturing using more than one polymer type are coinjection molding and two-shot molding.

3.5.5 Where possible, the ISO marking shall be located near the part number, cavity number, molding date, or other markings on the part. If there is no room near the other markings, or there are no other markings on the part, then the ISO marking shall be in an area that can be easily found when the part is disassembled from the vehicle.

3.6 Regrind. If regrind is used in production, a part made from the maximum amount of regrind must be tested and certified to print requirements. Production scrap (e.g., sprues, runners, gates, etc.) of the same material quality obtained from processing of a part may be used by admixture to the same mold charge after previous recycling (regrinding) and approval by GM Material Engineering provided that the specified properties of the molding compound and finished part will not change.

3.7 Part Finish. Parts must be free of burrs, tool marks or flashing which may be detrimental to satisfactory assembly safe handling, appearance or function.

3.8 Flammability. All plastic parts located in the vehicle interior must test to GMW3232. In addition, the materials and components shall meet the requirements according to the relevant legislations and regulations of the countries to which they are supplied (e.g., FMVSS 302 for U.S.A., documentation required according to TRIAS 48 for Japan).

3.9 Interior Plastic Part Performance. All plastic parts located in the vehicle interior must perform to GMW14444. All painted plastic parts in the vehicle interior must perform to GMW14444 and GMW14797.

3.10 Exterior Plastic Part Performance. All plastic parts located on the vehicle exterior must perform to GMW14650. All painted plastic parts on the vehicle exterior must perform to GMW14650 and GMW14797.

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.

If not otherwise agreed, all release tests shall be repeated and documented by the supplier prior to commencement of delivery of non-conforming bulk supplies. In individual cases, a shorter test can be agreed to between the responsible Engineering department and the supplier.

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.**