



Standard Requirements - Plastics

1 Scope

Note: Nothing in this standard supercedes applicable laws and regulations.

Note: In the event of conflict between the English and domestic language, the English language shall take precedence.

1.1 Purpose/Material Description. This standard provides the additional information for specifications to satisfy GM requirements for plastic materials and parts and is intended to reduce multiple entries of same information in math files. 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.

2 References

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

2.1 External Standards/Specifications.

None

2.2 GM Standards/Specifications.

GMW3013	GMW3221	GMW14444	GMW14797
GMW3059	GMW3232	GMW14650	GMW16853
GMW3116			

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 Part Marking/Recyclability/Recoverability. Part Marking/Recyclability/Recoverability per GMW3116.

3.6 Regrind. Unless specifically noted, regrind is not allowed. If regrind is allowed and is used in a production part, then a part produced from the maximum amount of regrind must meet part validation. If approved by GM Material Engineering, 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 recycling (regrinding) provided that the specified properties of the molding compound and finished part will not change.

3.6.1. Suffix RE (Regrind). The percent regrind allowed per part shall not exceed the numeric value following the Suffix RE symbol. If Home Scrap regrind as defined in GMW3116, scrap that is reused back into the same part, is the only type to be specified for use, the letters HS should follow the numeric regrind value. The use of

regrind must not preclude the part from meeting the other specified characteristics of part performance. In any case:

- The maximum regrind content shall be limited to the percent that was validated and submitted for Production Part Approval Process (PPAP).
- The type of regrind must be of the same material that was validated and submitted for PPAP.
- The regrind must be clean and dry, free of contamination.
- The regrind must be blended proportionately with the virgin.
- When this specification and Suffix RE does not appear on the part print, no regrind is approved for use.
- No painted, laminated or plated regrind may be used without the written approval of the GM Materials Engineering Department.

Note: To specify a regrind material, consult the following specifications:

- GMW3116 (see the definition of regrind in the Glossary).
- GMW3013 (see Additional Requirements in Section 3).

Use Suffix RE to specify a regrind material if a line call out is the chosen method of specification.

For example, RE50 = 50% maximum regrind, RE20HS = 20% maximum Home Scrap only.

3.6.2 Recycled Material Content Terms.

3.6.2.1 Industrial Scrap. Industrial scrap is product or material that has been generated as a by-product of a given process, which has properties allowing it to be recycled back through the same general process. Industrial scrap, sometimes referred to as home scrap or regrind, is not considered recycled.

3.6.2.2 Post-Consumer Waste. Post-consumer waste is product that has been discarded by an individual, commercial enterprise or other public or private entity after having fulfilled its intended application or use, i.e., nylon carpet, polypropylene battery cases and polycarbonate water jugs, polycarbonate Compact Disc (CD) or Digital Video Disc (DVD) and Polyethylene Terephthalate (PET) bottles.

3.6.2.3 Post-Industrial Waste. Post-industrial waste is product or material that has been generated as a by-product of a given process which has properties significantly different than those of the original material and therefore in its current form cannot be recycled back through the same general process (i.e., process scrap, off specification/wide specification/excess fiber, molding trial offal; meaning the waste or by-product of a process, trim offal, wide specification material, and unused resin from molders).

3.6.2.4 Recycled Material Content. Proportion expressed as mass of the recycled material, in a product or packaging. Only post-industrial and post-consumer material shall be considered recycled content. Industrial scrap is not considered recycled content.

3.6.3 Plastics Recycling Terms.

3.6.3.1 Home Scrap Regrind. Regrind which is used in the same part. For example, blue polypropylene door trim scrap used in the same blue door trim manufacturing process.

3.6.3.2 Post-Consumer Regrind. Regrind which is recovered from consumers and used to make new parts. For example, Acrylonitrile Butadiene Styrene (ABS) post-consumer telephone housings that are ground and made into console bins.

3.6.3.3 Post-Industrial Regrind. Regrind which is diverted from the original part production process and used into a different part. For example, blue polypropylene door trim scrap used in the substrate of an A-pillar.

3.6.3.4 Regrind. Irregularly shaped and sized materials that result from grinding parts, sprues, runners, etc. The material receives no further treatment, heat histories, or additives. Depending on the source and end use, regrind can fall into any of the three recycled content categories; home scrap, post-industrial, and post-consumer.

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 which are supplied, e.g., FMVSS 302 for the United States of America (U.S.A.), documentation required according to TRIAS 48 for Japan.