



ENGINEERING STANDARDS

Material Specification

SUPERCEDED
9985038

Grease, No. 2 Lithium

Do Not Use on New Programs; Replaced by GMW16601

Note: The 9985038 part number may still be active.

1 Scope

1.1 Material Description. This specification details the requirements of an extreme pressure lithium soap grease intended for lubrication of front suspension ball joints, steering linkages, general chassis lubrication, and other applications under all conditions of automotive service. The minimum requirements of this specification are equivalent to, and in some cases exceed, those specified to meet the National Lubricating Grease Institute (NLGI) LB chassis grease classification per ASTM D4950. (See definition for LB under Glossary in 7.1 of this document.)

This specification may involve hazardous materials, operations, and equipment. This specification does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this specification to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use.

1.2 Symbols. Not applicable.

1.3 Applicability. This grease is typically used on front suspension ball joints, steering linkages, general chassis lubrication, and any other applications of automotive service.

2 References

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

2.1 External Standards/Specifications.

ASTM D217	ASTM D1743	ASTM D2596	ASTM D4693
ASTM D445	ASTM D2265	ASTM D4170	ASTM D4950
ASTM D566	ASTM D2266	ASTM D4289	SAE AMS 3217/3B
ASTM D1742	ASTM D2509		

2.2 GM Standards/Specifications.

GMW3059

2.3 Additional References.

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

3 Requirements

3.1 Physical Properties. See Table 1.

3.2 All materials approved against this specification must be licensed by NLGI as meeting the LB chassis grease classification.

3.3 All materials approved against this specification must pass all material compatibility and performance related requirements as specified by the control division.

3.4 All ASTM International (ASTM) specified tests shall be performed according to the latest published version unless otherwise required by this specification.

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. All shipments of material or parts under contract or purchase order manufactured to this specification shall be equivalent in every respect to the initial samples approved by Engineering. There shall be no changes in either formulation or manufacturing processes permitted without prior notification and approval by Engineering. Lack of notification by the supplier constitutes grounds for rejection of any shipment. While samples may be taken from incoming shipments and checked for conformance to this specification, the supplier shall accept the responsibility for incoming shipments meeting this specification without dependence upon purchaser's inspection.

The series of tests used to approve each batch of product along with acceptance limits will be agreed upon by the purchaser and seller. The laboratory providing the certificate of analysis must also participate in a proficiency testing program (round robin) that is approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team (GSSLT) or designate. The Fuels, Fluids, and Lubricants GSSLT or designate must receive copies of the proficiency testing reports directly from the test program administrator.

5.4 Initial Source Approval. No shipment shall be made by any supplier until representative initial production samples have been approved by the Fuels, Fluids, and Lubricants Global Subsystem Leadership Team or designees meeting the requirements of this specification.

5.5 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.

5.6 All materials supplied to this standard must comply with the requirements of the International Materials Database System (IMDS) and GMW3059, **Restricted and Reportable Substances for Parts**.

6 Approved Sources.

Materials supplied to this specification must be approved by General Motors.

The appropriate GM Materials Engineering department(s) must confirm material as meeting the requirements of this specification. Any test data sheets of material submitted to General Motors for such confirmation (e.g., during Production Part Approval Process (PPAP)) under this material specification must list all properties and must apply corresponding test methods of this material specification.

7 Notes

7.1 Glossary.

LB: L=Certified for chassis use, B=best. LB=highest rated chassis grease.

MATSPC: Global repository of GM approved materials for corresponding GM Engineering Standards.

7.2 Acronyms, Abbreviations, and Symbols.

ASTM	ASTM International
CR	Chloroprene
EP	Extreme Pressure
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GSSLT	Global Subsystem Leadership Team
IMDS	International Materials Database System