



ENGINEERING STANDARDS

Material Specification

9985276

Grease, Low Temperature, Non-Soap, No. 1

1 Scope

1.1 Material Description. A low temperature, non-soap, grease having a minimum change in consistency with change in temperature and maximum resistance to water washout such as used for throttle linkage applications. The grease shall be compounded from a low pour point, synthetic hydrocarbon lubricant thickened with a modified bentonite clay and fortified with an extreme pressure additive and a rust inhibitor. It shall be a smooth homogenous mixture, free from lumps, crusts, granular particles or any other abrasive or otherwise undesirable fillers or impurities. The odor shall be clean and no perfume shall be used in the compound.

1.2 Symbols. Not applicable.

1.3 Applicability. This grease is used for throttle linkage applications or any other application requiring low temperature properties and maximum resistance to water washout.

2 References

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

2.1 External Standards/Specifications.

ASTM D217

ASTM D1264

ASTM D1742

ASTM D1743

ASTM D566

2.2 GM Standards/Specifications.

GMW3059

GMW14444

GMW16853

2.3 Additional References.

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

3 Requirements

3.1 Reference Table 1.

Table 1: Properties and Values

Properties	Values
Color	Natural tan
Thickener	Bentonite
Penetration at 25 °C, ASTM D217	
• 60 strokes	320 minimum
• 10 000 strokes	340 minimum
Dropping point, ASTM D566	200 °C minimum
Oil separation, ASTM D1742	15 mass % maximum
Water washout, 25 °C, ASTM D1264	1.5 mass % maximum
Rust test rating, ASTM D1743	No. 1

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 Identification. The following information shall appear on each container: GM part number; manufacturer's identification, part number and batch number; date of manufacture; and quality and mass of material.

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.