



Grease, Molybdenum Disulfide Containing, Initial Engine Assembly

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 Material Description. This specification covers molybdenum disulfide greases which contains a minimum 10% molybdenum disulfide by mass.

1.2 Symbols. Not applicable.

1.3 Applicability. The approved grease is used to lubricate engine components during initial assembly.

1.4 Remarks. Not applicable.

2 References

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

2.1 External Standards/Specifications.

ASTM D97	ASTM D445	ASTM D2265	ASTM D6184
ASTM D217	ASTM D566		

2.2 GM Standards/Specifications.

GMW3059

2.3 Additional References. Not applicable.

3 Requirements

3.1 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.

3.2 Physical Properties/Requirements. See Tables 1, 2, and 3.

Table 1: Physical Properties of Grease

Properties	Test Method	Units	Requirements
Penetration, worked	ASTM D217	mm/10	310 to 340
Oil Separation	ASTM D6184	%	6 maximum
Dropping point	ASTM D566 or ASTM D2265	Degrees C	177 minimum

Note: % = Percent(age), C = Celsius, mm = millimeter(s).

Table 2: Physical Properties of Base Oil

Properties	Test Method	Units	Requirements
Viscosity at 40 °C	ASTM D445	cSt	60 to 130
Pour point	ASTM D97	Degrees C	-18 maximum

Note: cSt = Centistoke(s).

Table 3: Molybdenum Requirements

Properties	Test Method	Units	Requirements
Molybdenum Disulfide	Contact fluids group on proposed method	%	10 minimum
Elemental Molybdenum ^{Note 1}		%	6% minimum

Note 1: Molybdenum disulfide particle size shall be Technical Grade Fine, Fisher 0.6 µm to 0.8 µm.

3.3 Approved Part Number (Reference Only). Currently the only approved part number is 9985861.

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.