



Grease, Blend of Synthetic Oils with Polyurea Thickener

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. Greases approved to this specification shall be a blend of synthetic base oil with a polyurea thickener.

1.2 Symbols. Not applicable.

1.3 Applicability. Grease described in this specification is intended for use in Constant Velocity Joints (CVJ), half shafts or bearings.

1.4 Remarks. Greases approved to this specification are not compatible with greases approved to GMW18256.

2 References

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

2.1 External Standards/Specifications.

ASTM D130	ASTM D1264	ASTM D2266	ASTM D6184
ASTM D217	ASTM D1478	ASTM D2596	
ASTM D972	ASTM D2265	ASTM D6138	

2.2 GM Standards/Specifications.

GMW3059	GMW18256
---------	----------

2.3 Additional References. Not applicable.

3 Requirements

3.1 All materials supplied to this standard must comply with GMW3059, Restricted and Reportable Substances. For raw materials, non-dimensional materials (e.g., fluids, greases) and/or bulk materials that require approval into the GM Materials Approved Source List (GMMASL), an International Material Data System (IMDS) submission must be made by the material supplier as a material Material Data Sheet (mMDS). After the mMDS is approved by the GM IMDS team, the materials supplier is to provide a "Header only report" to the responsible GM Materials Engineer. Further guidance can be found in the GM-specific instructions on the IMDS website.

3.1.1 For grease properties see Table 1.

Table 1: Grease Properties

Property	Test method	Units	GMW18385-9986645
Penetration, unworked and worked (x60)	ASTM D217	mm/10	280 to 320
Dropping point	ASTM D2265	°C	230 minimum
Oil separation	ASTM D6184	%	2 maximum
Evaporation	ASTM D972	%	1 maximum
Copper strip corrosion	ASTM D130	N/A	1B maximum
Water washout	ASTM D1264	%	3.5 maximum
Corrosion resistance (EMCOR Test)	ASTM D6138	N/A	0
Penetration, cold ^{Note1}	ASTM D217	mm/10	45 minimum
Four ball weld	ASTM D2596	Kg	315 maximum
Four ball wear	ASTM D2266	mm	0.41 maximum
Low temperature torque, starting	ASTM D1478	g·cm	3125
Low temperature torque, running			2195

Note: °C = degrees Celsius, % = percent(age), g·cm = unit of mass and volume, Kg = kilogram(s), mm = millimeter(s), N/A = Not Applicable

Note 1: Soak at -40 °C for 6 h after 60 stroke penetration.

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