



Gearbox Fluid for Wet Dual Clutch Transmission (DCT)

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 material specification defines requirements for wet dual clutch transmission (DCT) gearbox fluid. See Table 1.

1.2 Symbols. Not applicable.

1.3 Applicability. Wet DCT gearbox.

2 References

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

2.1 External Standards/Specifications.

ASTM D92

ASTM D445

ASTM D1298

ASTM D2270

ASTM D97

2.2 GM Standards/Specifications.

GMW3059

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.

Table 1: Physical Requirements

Property	Method	Requirement	Units
Kinematic Viscosity at 40 °C	ASTM D445	7	cSt
Kinematic Viscosity at 100 °C	ASTM D445	34.7	cSt
Density at 20 °C	ASTM D1298	0.839	kg/m ³
Flash point	ASTM D92	220 (428)	°C (°F)
Pour point	ASTM D97	-54 (-65.2)	°C (°F)
Viscosity Index	ASTM D2270	168	Unitless

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.

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.

For other GM locations, the responsible engineering group should be contacted to obtain the approved source in that individual country.

7 Notes

7.1 Glossary. Not applicable.

7.2 Acronyms, Abbreviations, and Symbols.

cSt	centistokes
DCT	Dual Clutch Transmission
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GMMASL	GM Material Approved Source List
GSSLT	Global Subsystem Leadership Team
IMDS	International Material Data System
mMDS	material Material Data Sheet
MSDS	Material Safety Data Sheet