



GREASE, CALCIUM COMPLEX THICKENED MINERAL OIL, TRIPOD TYPE CV JOINTS

WSS-M1C272-A

1. SCOPE

The material defined by this specification is grease consisting of calcium complex thickened mineral oil for the lubrication of tripod type constant velocity joints.

2. APPLICATION

This specification was released originally for grease used for lubrication of tripod type constant velocity (CV) joints for FSAO market.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.1.1 Initial Qualifications

The supplier must furnish to the affected Materials Engineering activity a completed and certified copy of the attached Supplement A and test reports demonstrating the capability of the process for the listed critical properties.

3.1.2 Ongoing Verification Plan

In addition to the control plan, the supplier and affected Materials Engineering activity shall establish a mutually agreed upon ongoing product verification plan which will be listed on Supplement B.

If the test results do not support the originally submitted data, the supplier must retest the product in coordination with the affected Materials Engineering activity. This retest must be conducted and certified by a FORD approved test facility.

3.2 CONSISTENCY

Material shall be a smooth homogeneous product free from abrasive particles, it shall be consistent in color and texture, and free from objectionable odors during normal storage. It shall be suitable for the intended application.

Date	Action	Revisions
2007 07 11	Activated	



Documents

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3.3 FUNCTIONAL APPROVAL

Materials being evaluated for initial approval may be subjected to a functional trial. Functional trial results shall be evaluated by the responsible Systems Engineering and Materials Engineering activities prior to material approval and release.

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification.

4.1 TYPICAL PROPERTIES

4.1.1	Color	light Brown
4.1.2	Calcium complex soap, %wt	16.0 to 19.0
4.1.3	Penetration (ASTM D 217)	
	After 60 strokes	320
	Change after 100,000 Strokes	+100
4.1.4	Dropping Point, (°C), min. (ASTM D 566)	300
4.1.5	Oxidation Stability ΔP (kPa) (ASTM D 942, 100hours 100 °C), max.	< 50
4.1.6	Water Content, , (%wt) (ASTM D 95)	<0.1
4.1.7	Oil Separation , max (IP 121, 7 days at 40 °C by weight)	5.0
4.1.8	Loss on Evaporation 22 hours at 99.5 °C , %wt (ASTM D 942)	1.0

4.2 SUPPLEMENT C

This is to be used for additional information required for initial qualification.