



ELECTRICAL GREASE PERFORMANCE

WSS-M13P14-A

1. SCOPE

This specification defines the requirements for approval of grease used in electrical applications.

2. APPLICATION

This performance specification was originally released for electrical switches, connectors, spark plug wire sets, wire harnesses and other electrical related applications.

2.1 LIMITATIONS

Limitations relative to the application of this grease must be listed in Supplement A Part 3 of the Data Submission Spreadsheet. Sulfur containing greases should not be used in contact with silver alloy or inks.

3. REQUIREMENTS

Material performance requirements per paragraph 3.3 are to be submitted for qualification of materials. Additional data for specific applications must be submitted in Supplement B of the Data Submission Spreadsheet. Contact the appropriate materials engineer to obtain a copy of the spreadsheet.

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).

3.2 FUNCTIONAL TRIAL

Materials being evaluated to this specification shall be subjected to a functional trial. Functional trial results must be approved by the affected assembly operation and Design Engineering. Results shall be made available to Materials Engineering prior to material approval and release. The design engineer will document the functional trial and supply the information in Supplement A Part 2.

3.3 PERFORMANCE REQUIREMENTS

3.3.1 Penetration (ASTM D 217, DIN ISO 2137)

Worked 60 cycles
Worked 100,000 cycles, max

Report
+/- 15% change from
60 cycle result

3.3.2 Oxidation Stability, kPa (ASTM D 942 or DIN 51808, 100 hr at 99 °C)

Report

Date	Action	Revisions
2009 01 08	Revised	See summary of revisions
2007 10 11	Activated	

L. Schmalz - FNA



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3.3.3 Dropping Point, °C, min 130
(ASTM D 566 or ASTM D 2265, DIN ISO 2176)

3.3.4 Water Spray-Off, max 25%
(ASTM D 4049, 5 min at 38 °C)

3.3.5 Interface Compatibility

Production representative materials specific to the application should be used for the following tests.

3.3.5.1 Chemical Attack to Painted Surfaces
(FLTM BJ 126-01) No staining or softening
of automotive finishes.

Note: Include chemical attack test when used in contact with paint surfaces.

3.3.5.2 Resistance to Stress Cracking No cracking or crazing
(FLTM BO 127-03)

Note: Include resistance to stress cracking when used in contact with polymers such as PC, ABS, PC+ABS, ASA or acrylic.

3.3.5.3 Elastomer Compatibility
(ASTM D 4289, DIN 53505, DIN 53504 70 h, 100 °C)
Volume change 0 to 30%
Hardness change, max -30% to 0
Tensile Strength change, Report %

Note: Include elastomer compatibility when used in contact with elastomeric materials. Application specific elastomer should be used for testing instead of a reference elastomer.

3.3.6 Oil Separation, max 10%
(ASTM D 1742 or Federal Standard
791C, Method 321.3, DIN 51817)

3.3.7 Copper Corrosion, max 1B
(ASTM D 4048, 24 h, 100 °C)

3.4 INFORMATION TO INCLUDE ON DRAWING

The following call-out information must be included on any engineering component/assembly drawing that specifies grease. Option A is the preferred method. Use Option B in special circumstances, when the grease product information is considered proprietary. Option B must be reviewed and concurred by Materials Engineering.

Option A (preferred method)

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Supplier: _____

Product Code: _____

Trade Name: _____



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