



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

ADHESIVES, ANAEROBIC, PRE-APPLIED THREADLOCKING

WSK-M2G354-A1/A9

1. SCOPE

These products produce dry to the touch latex films containing anaerobic adhesive and encapsulated activator. Typically, the mixed product is applied in a band to fastener threads with automated equipment, and the carrier is dried in 65 - 70 C ovens. The dry film remains inert until trapped and sheared in fastener threads during torquing. The encapsulated activator is released causing the anaerobic material to polymerize to a tough, thermoset plastic that locks and seals either straight thread fasteners or tapered thread pipe fittings.

2. APPLICATION

These specifications were originally released for industrial quality materials used to lock and seal parts.

They may be used for fluid pressure resistance, to prevent loosening under shock and/or vibration, or to prevent leakage due to vibration.

A1 Similar to A4 except lubricant added for torque/tension control.

A2 A pre-applied dry to the touch encapsulated anaerobic adhesive, high strength for permanent fastener locking, 150 C continuous service temperature.

A3 A pre-applied dry to the touch encapsulated anaerobic adhesive, high strength for permanent fastener locking, ideal for hot oil application, 200 C continuous use temperature.

A4 A pre-applied dry to the touch encapsulated anaerobic adhesive, medium strength for general purpose use, similar to A2 in all other respects.

A5 A pre-applied dry to the touch encapsulated anaerobic adhesive for threadlocking and threadsealing, low strength for easy fastener serviceability, 150 C continuous use temperature.

A6 Similar to A2 except higher strength and for use with plated fasteners.

A7 Similar to A4 except for use on plated fasteners.

A8 Similar to A2 except even higher strength and for use with plated fasteners.

A9 Similar to A2 except lubricant added for fastener torque/tension control.

Date	Release No.	Release/Revision	
1990 08 01	EP00E0103153000	Released	F.O. Swanson J. Schult

WP 3948-a

Page 1 of 5

9009160 0009003 786



3. REQUIREMENTS

3.1 STATISTICAL PROCESS

Suppliers must conform to the requirements of Ford Quality System Standard Q-101. A mutually acceptable Control Plan as described therein is required for material/source approval. Appropriate statistical tools must be used to analyze process/product data so that variation in the final product is continuously reduced.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

Ford Motor Company, at its option, may conduct infrared and/or thermal analysis of material/parts supplied to this specification. The IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING AND TEST CONDITIONS

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

3.4 VISCOSITY

(ASTM D 1084, Method B at 23 +/- 2 C, determined without activator capsules)

Type	Brookfield Model	Spindle	RPM	mPa.s
WSK-M2G354-				
A1	RVF	5	2	45 000 - 85 000
A2	RVF	5	2	75 000 - 100 000
A3	RVF	5	2	75 000 - 100 000
A4	RVF	5	2	75 000 - 100 000
A5	RVF	5	2	75 000 - 100 000
A6	RVF	5	2	75 000 - 100 000
A7	RVT	6	2.5	90 000 - 140 000
A8	RVT	6	2.5	95 000 - 150 000
A9	RVT	6	2	190 000 - 470 000