Ford Motor Company

# ENGINEERING MATERIAL SPECIFICATION

Material Name | Specification Number

**ADHESIVES, ANAEROBIC, PRE-APPLIED THREADLOCKING** **WSK-M2G354-A1/A7**

## 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.

| Date | Action | Revisions |
|---|---|---|
| 2014 12 17 | Revised | Separated A8-9 L. Sinclair, NA |
| 2003 01 24 | Revised | Para 3.0 inserted ; Para 3.1, 3.2, 3.3, 3.8, 4 deleted |
| 1990 08 01 | EP00E0103153000 | Released F.O. Swanson J.Schult |



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## 3. REQUIREMENTS

### 3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

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

### 3.4 VISCOSITY

(ASTM D 1084, Method B at 23 +3/- 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 |

### 3.5 LOCKING TORQUE, min, N.m

(FLTM BV 128-01, determined with activator capsules)

| | Type | After 72 h room temperature cure | After 72 h room temperature cure followed by 1 h at 150 +/- 2 °C . Test at room temperature. |
|---|---|---|---|
| WSK-M2G354- | | | |
| A1 | Break | 31 | 37 |
| | Prevail | 8 | 8 |
| A2 | Break | 17 | 19 |
| | Prevail | 11 | 11 |



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