Ford Motor Company

ENGINEERING MATERIAL SPECIFICATION

Material Name	Specification Number
ADHESIVES, CYANOACRYLATE, (CA), METHYL	**WSK-M2G401-A1/A4**
ADHESIVES, CYANOACRYLATE, (CA), ETHYL	**WSK-M2G402-A1/A11**
ADHESIVES, CYANOACRYLATE, (CA), SURFACE INSENSITIVE	**WSK-M2G403-A1/A4**

1. SCOPE

The materials defined by these specifications are a series of solventless, room temperature curing cyanoacrylate adhesives.

2. APPLICATION

These specifications were released originally for single component industrial quality adhesives formulated for bonding all metals, most rubbers and many plastics.

WSK-M2G401 - Methyl Cyanoacrylates

A1 A thin penetrating methyl cyanoacrylate adhesive for use in gaps up to 0.05 mm, fast fixturing on metal surfaces, 82 °C continuous use temperature.

A2 A low viscosity methyl cyanoacrylate adhesive for use in gaps up to 0.10 mm, similar to A1 in all other respects.

A3 A medium viscosity methyl cyanoacrylate adhesive for use in gaps up to 0.20 mm, slightly slower fixturing allows 15 second alignment time, similar to A1 in all other respects.

A4 A low viscosity methyl cyanoacrylate adhesive for use in gaps up to 0.10 mm, slightly slower fixturing, similar to A1.

WSK-M2G402 - Ethyl Cyanoacrylates

A1 A penetrating ethyl cyanoacrylate adhesive for use in gaps up to 0.05 mm, fast fixturing on plastic and rubber surfaces, 82 °C continuous use temperature.

Date	Action	Revisions	
2017 01 04	Revised	Separated from M2G404 and M2G405	S. Short, NA
2014 12 17	Revised	Removed M2G405-A4	L. Sinclair, NA
1990 08 01	EP00E01031538000	Released	F.O. Swanson J. Schult

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A2 A low viscosity ethyl cyanoacrylate adhesive for use in gaps up to 0.10 mm, similar to A1 in all other respects.

A3 A low viscosity ethyl cyanoacrylate adhesive for use in gaps up to 0.13 mm, somewhat higher strength, similar to A1 in all other respects.

A4 A medium viscosity ethyl cyanoacrylate adhesive for use in gaps up to 0.10 mm.

A5 A medium viscosity ethyl cyanoacrylate adhesive for use in gaps up to 0.18 mm, slower fixturing, similar to A1.

A6 A medium viscosity ethyl cyanoacrylate adhesive for use in gaps up to0.20 mm, similar to A5 in all other respects.

A7 A gel-like ethyl cyanoacrylate adhesive for use in gaps up to 0.25 mm, for porous or rough surfaces, somewhat slower fixturing, 80 +/-2 °C continuous service temperature.

A8 A penetrating, low strength, ethyl cyanoacrylate adhesive for use in gaps up to 0.05 mm where a temporary bond is desired.

A9 A medium viscosity ethyl cyanoacrylate adhesive for use in gaps up to 0.15 mm, slower fixturing, similar to A1.

A10 A medium viscosity ethyl cyanoacrylate adhesive designed for resisting thermal cycling from - 40 to + 120 °C. Maximum continuous temperature 100 °C. Exhibits better humidity resistance than standard instant adhesives.

A11 A gel-like ethyl cyanoacrylate for use in gaps up to 0.25 mm, similar to A10 in all other respects.

WSK-M2G403 - Surface Insensitive Cyanoacrylates

A1 A penetrating ethyl cyanoacrylate adhesive for gaps up to 0.05 mm and for plated parts, 80 +/- 2 °C continuous service temperature.

A2 A low viscosity ethyl cyanoacrylate adhesive for gaps up to 0.10 mm and for low humidity during assembly, 80+/- 2 °C continuous use temperature.

A3 A medium viscosity ethyl cyanoacrylate adhesive for gaps up to 0.15 mm and for mildly contaminated surfaces, 80 +/- 2 °C continuous use temperature.

A4 A gel-like ethyl cyanoacrylate adhesive for gaps up to 0.25 mm, and for porous or rough parts, 80+/- 2 °C continuous use temperature.

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).

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3.4 VISCOSITY
(ASTM D 1084, Method B at 23 +3/- 2 °C)

Type	Brookfield Model	Spindle	RPM	mPa's
WSK-M2G401 - Methyl Cyanoacrylates				
A1	LVF*	1	60	1 - 5
A2	LVF*	1	30	50 - 100
A3	LVF*	4	50	1,000 – 2,000
A4	LVF*	1	30	90 - 175
WSK-M2G402 - Ethyl Cyanoacrylates				
A1	LVF*	1	60	1 - 5
A2	LVF*	1	30	20 - 60
A3	LVF*	1	30	50 - 100
A4	LVF*	1	30	100 - 200
A5	LVF*	2	12	1,000 – 2,000
A6	LVF*	2	6	2,000 – 3,500
A7	RVT	TC (Helipath)	20	15,000 – 40,000
A8	LVF*	1	60	2 - 8
A9	LVF*	2	30	600 - 900
A10	LVF*	2	30	400 - 700
A11	RVT	TC (Helipath)	20	15,000 – 45,000

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