

**PURGE SOLVENT FOR MANUAL AND AUTOMATED
PAINT EQUIPMENT****WSS-M14J266-A****1. SCOPE**

This specification qualifies the chemical, physical and functional properties of blended organic purge solvents prior to implementation.

2. APPLICATION

These solvent blends are intended to be used for purging manual and automated paint application equipment during color changes and clear coat bell cleaning. Purge is designed for maximum purging efficiency and cleaning ancillary equipment.

3. REQUIREMENTS

3.1 SPECIFIC GRAVITY AT 15.5 C (60°F): Report on C of A
(ASTM D4052)

3.2 APHA COLOR: 12.5 max
(ASTM D1209)

3.3 FLASH POINT 15.5 °C min
(ASTM D56)

3.4 COMPOSITION: Pass
(Gas Chromatography ASTM E260)

All chemical constituents shall be qualified and quantified by Gas Chromatography (GC) on each batch of purge solvent blend manufactured and must meet full disclosure MSDS requirements.

3.5 NON-VOLATILE 0.15 wt.%, max
(ASTM D2369)

3.6 WATER CONTENT
(ASTM D1364)

3.6.1 When used with 2K paint technology 0.1 wt% max

3.6.2 When used with non 2K paint technology 0.5 wt% max

3.7 RESISTIVITY 1.0 MΩ min
(ASTM D5682)

3.8 APPEARANCE Pass
(Visual)

The blended solvent shall be free of haze, suspended matter or any other insoluble materials.

Date	Action	Revisions	Rev. 0
2013 11 14	Released		

**Documents**

Jim Cottrell, NA

Document Sharing Hub



3.9 FUNCTIONAL PROPERTIES

The blended purge solvent shall demonstrate effective cleaning performance as determined in test methods (1) and (2) listed below and not have any compatibility problems with the materials used in the paint spray booth.

- (1) Efficiency Test (*Purge Test for Purging Solvent*, FLTM AI 104-01)
- (2) The solvent shall perform efficiently and effectively in a simulated color change and bell wash process. The testing below will verify the efficiency of the purge solvent.

Bell Wash Testing: Determine an acceptable “signal”. A signal being that the bell face is not 100% dirty or 100% clean. This is achieved by manipulating bell speed, shaping air; flash time and cup wash volume. Once the parameters that provide a quality signal have been determined, all of the additional purge blends shall be tested within those parameters. It is recommended that at least 3 consecutive cup washes be performed. In doing, be sure not to manually clean the face of the bell until all of the runs are completed for that purge blend. The cup wash volume is recorded and the bell face appearance is photo documented for each consecutive run.

Purge Cycle Testing: Determine an acceptable “signal”. To produce a “signal”, the purge cycle is manipulated to produce the lowest volume of purge to clean a paint filled applicator line.

Parameters that can be manipulated include air chop pressure and time. Once an optimal signal has been achieved, all additional purge blends shall be tested using the same parameters. After the appropriate purge cycle is determined, the paint line is filled with paint and the purge cycle is executed. After the purge cycle is completed, collect a small volume from the “dump” line for turbidity measurement in NTU. Repeat this cycle at least 3 times for each purge tested.

- (3) **Infinite Dilution Test:** An infinite dilution test is performed to evaluate the compatibility of solvents with the paint. One drop of paint is placed into a vial filled with purge solvent. An observation is made on how the paint disperses into the solvent. If the paint disperses readily into the solvent it is considered compatible. Paint kick out, long dispersing times, or paint fall out are negative results.
- (4) **Compatibility/Crater Testing** to be performed at the assembly plant concurrent with the paint suppliers representative

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification. Contact gmfs@ford.com for questions concerning Engineering Material Specifications.

5. SUMMARY OF REVISIONS