



DIESEL EXHAUST FLUID (DEF)

WSS-M99C130-A

1. SCOPE

The material defined by this specification is a NO_x-reduction agent for use in vehicles equipped with Selective Catalytic Reduction (SCR) systems.

2. APPLICATION

This specification was released originally for material used as initial fill and service fluid for diesel vehicles equipped with selective catalyst reduction converters.

3. REQUIREMENTS

This material must meet the requirements of CEFIC (European Chemical Industry Council) according to DIN 70070 and ISO 22241-1.

3.1 APPROVED SOURCES

This specification requires the use of approved sources. Only the sources identified on the Ford Approved Source List (ASL) can be used when this specification is listed on the drawing, CAD file, or other documents. The list of approved sources is located within Ford at www.mats.ford.com or available externally through a Ford Materials Engineer.

3.2	UREA CONTENT (ISO 22241-2 Annex B (*)) ISO 22241-2 Annex C)	31.8 – 33.2 % (m/m)
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(*) Calculated without subtracting nitrogen from ammonia

3.3	DENSITY at 20 °C (ISO 3675 or ISO 12185)	1.087 – 1.093 g/cm ³
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3.4	REFRACTIVE INDEX at 20 °C (ISO 22241-2 Annex C)	1.3814 - 1.3843
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3.5	ALKALINITY AS NH₃ (ISO 22241-2 Annex D)	0.2 % (m/m), max
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3.6	BIURET (ISO 22241-2 Annex E)	0.3 % (m/m) max
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Date	Action	Revisions	Rev. 2
2016 07 05	Revised	See Summary of Revisions	C. Richardson, NA
2011 03 17	Revised	Revised: Title and section 3.4	C. Richardson, NA
2008 09 12	Activated		C. Richardson



3.7	ALDEHYDES (ISO 22241-2 Annex F)	5 mg/kg max
3.8	INSOLUBLE MATTER (ISO 22241-2 Annex G)	20 mg/kg max
3.9	PHOSPHATE (PO4) (ISO 22241-2 Annex H)	0.5 mg/kg max
3.10	CALCIUM (ISO 22241-2 Annex I)	0.5 mg/kg max
3.11	IRON (ISO 22241-2 Annex I)	0.5 mg/kg max
3.12	COPPER (ISO 22241-2 Annex I)	0.2 mg/kg max
3.13	ZINC (ISO 22241-2 Annex I)	0.2 mg/kg max
3.14	CHROMIUM (ISO 22241-2 Annex I)	0.2 mg/kg max
3.15	NICKEL (ISO 22241-2 Annex I)	0.2 mg/kg max
3.16	ALUMINUM (ISO 22241-2 Annex I)	0.5 mg/kg max
3.17	MAGNESIUM (ISO 22241-2 Annex I)	0.5 mg/kg max
3.18	SODIUM (ISO 22241-2 Annex I)	0.5 mg/kg max
3.19	POTASSIUM (ISO 22241-2 Annex I)	0.5 mg/kg max

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.

4.1 APPROVAL OF MATERIALS

Suppliers desiring approval of their materials shall first obtain an expression of interest from Purchasing, Design or Product Development, and Materials Engineering. The supplier shall submit a completed copy of their laboratory test reports, signed by a qualified and authorized representative of the test facility, demonstrating full compliance with all the requirements of the Material Specification. Tested material samples must be available for review upon request and kept for a minimum of one year. Upon request, the supplier will review the associated quality control documents (Process Failure Mode and Effects Analysis, Control Plans, Certification testing) with Ford.