

NAVISTAR, INC.		
CEMS (CORPORATE ENGINEERING MATERIAL SPECIFICATION)		NUMBER: CEMS B-38
TITLE: Windshield Washer Solvent		CURRENT ISSUE DATE: June 2011
WRITTEN/REVIEWED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES ISSUE OF: August 2006
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<i>This specification may involve hazardous materials, equipment, and procedures. This specification does not purport to address all of the safety issues associated with its use. The user is responsible to consult appropriate safety and health practices and to determine the applicability of regulatory limits prior to use.</i>		
Change Notice: Replaced "International Truck and Engine Corporation" with Navistar, Inc. per corporate Directive; editorial changes.		

1.0 SCOPE

This specification covers the Company's requirements for windshield washer solvent.

2.0 INTRODUCTION

Care must be taken to insure that windshield washer additives are compatible with elastomeric materials they come in contact with, and not produce stains on the paint finish.

2.1 Restricted Chemical Substances

Effective January 1, 2007, all product supplied to the requirements of this specification must comply with the requirements of the CEMS B-50 specification.

3.0 CONTENTS

	PAGE
REFERENCE DOCUMENTS	1
PROPERTY REQUIREMENTS	2
QUALITY	2
METHODS OF TEST	2
SOURCE APPROVAL AND QUALITY CONTROL	3
DESIGNATION ON DRAWING AND PURCHASE ORDER	3
PACKING AND SHIPPING	3
TECHNICAL INFORMATION	3

4.0 REFERENCE DOCUMENTS

Unless otherwise specified, the latest issue of all referenced standards shall apply. The following standards, specifications and regulations are referenced in this specification.

Quality System Standard ISO 9001 or TS-16949	NAVISTAR CEMS B-50
NAVISTAR Manufacturing Standard MS-D-13	ASTM D 97
CFR Title 29, Part 1910	ASTM D 1122
NAVISTAR CEMS BT-35	ASTM D 2109
NAVISTAR CEMS BT-48	ASTM D 892
	ASTM D 1176

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JUNE 2011

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5.0 CLASSIFICATION

The windshield washer solvents are classified by their concentration level.

6.0 PROPERTY REQUIREMENTS

Material purchased to this specification will conform to the following requirements.

CHEMICAL COMPONENTS AND PROPERTIES		SPECIFICATION LIMITS		TEST METHOD (ASTM UNLESS OTHERWISE SPECIFIED)
		concentrate	diluted	
Methyl alcohol, mass%, min		95	47	CEMS BT-48
Water, mass % max		5	52	
Pour Point, °C, max		-90	-50	D 97
Specific Gravity 15/15°C, max		0.8100	0.9252	D 1122
Foaming Tendency, milliliters, max		150	150	See "Methods of Test"
Staining Test	as received	pass	pass	CEMS BT-35
	50% solution *	pass	-	
Soluble Detergent, mass %		0.5 to 1.5	0.25 to 0.75	D 2109, Method B
Color		blue	blue	-

* By volume in distilled water.

7.0 QUALITY

Material purchased to this specification will be blended with commercial grade, 99 percent purity chemicals and will be free from suspended matter. Concentrate will contain 0.001 mass percent and diluted will contain 0.0003 mass percent of Alizarine Fast Blue RB 100 percent. This material will be suitable for the use intended. Suppliers will qualify their products, containers and packages for use in all states and to meet Interstate Commerce Commission regulations.

7.1 Engineering Qualification

Production material can be furnished under this specification only after formal Engineering Qualification. The appropriate purchasing department (refer to the Corporate Purchasing Delegation Manual) will request Materials Engineering, TDTC, or a Materials Engineering designated facility, to conduct the engineering qualification tests with the supplier furnishing all required samples. Material submitted for qualification will be accompanied by detailed test information and also by certification that the material meets all requirements of this specification.

7.2 After the material has been tested by Materials Engineering, the design engineering departments will be notified and, if appropriate, invited to conduct performance tests as deemed necessary. On completion of these tests, the purchasing departments involved and all engineering departments will be notified that the material has been either qualified or rejected.

8.0 METHODS OF TEST

8.1 Foaming Tendency

Perform the determination of foaming tendency in accordance with ASTM D 892, Sequence I. Test fluids will be prepared as follows:

8.1.1 Concentrate: The test fluid will be a 50% solution, in distilled water, prepared in accordance with ASTM D 1176, Section 5.3.

8.1.2 Diluted: The material as received will be used as the test fluid.

8.2 BT Test Methods

These test methods are available from IHS Global, 15 Inverness Way East, Englewood, CO 80112 (1-800-854-7179).

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