INTERNATIONAL TRUCK and ENGINE CORPORATION

CEMS (CORPORATE ENGINEERING MATERIAL SPECIFICATION)		NUMBER: CEMS G-5, Part II Grade-29HS, -29THS
TITLE: Part II Paints – Topcoats, Grade -29HS and -29THS		CURRENT ISSUE DATE: February 2002
WRITTEN/REVIEWED BY: Materials Engineering	APPROVED BY: Materials Engineering	SUPERSEDES ISSUE OF: July 1999

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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.

Change Notice: **Editorial Changes**

1.0 APPLICATION

This specification covers a one-component thermosetting acrylic topcoat† used for the interior of trucks. This is a high solids coating to meet a 3.5 lb/gal maximum VOC when averaged across production usage of these enamels. This enamel is to be supplied at a ready-to-spray viscosity. The Grade-29HS topcoat has a nominal bake temperature of 250°F. The Grade-29THS topcoat has a higher bake temperature (approximately 310°F).

2.0 SCOPE

This specification covers the as-received liquid and the as-applied dry film property requirements of the paint.

for sections 3.0, 4.0, 5.0, 7.0 8.0, 9.0, 10.0, and 11.0; see Part II General Requirements

6.0 PROPERTY REQUIREMENTS

6.1 Liquid Properties †

LIQUID PROPERTIES		INTERNATIONAL COLOR DESIGNATION						TEST DESIGNATION (d)
		0001F	0001J	1590G	-	8602G	8240G	
		Black		Brown		Gray		
Weight Per Unit Volume, min (a)	lb/gallon			8.1	-	8.1	8.1	ASTM D-1475
	kg/liter			0.97	-	0.97	0.97	
Nonvolatile Content, % by Weight, min (a)				60	-	60	60	CEMS GT-1A
Cryptometer Reading, min (b)	ft^2/gallon	1100						CEMS GT-2A
	m^2/liter	26						
VOC Content, max	lbs/gallon	3.5						ASTM D-3960
	kg/liter	0.42						
Viscosity, seconds (a)		18-22						No. 4 Ford Cup ASTM 1200
Fineness of Grind, North Standard Graduations (b)				6.0	-	6.0	6.0	ASTM D 1210
Flash Point, min (C)	°F	45°						ASTM D 56
	°C	10°						
Dilution Stability, Hours, min (a)		16						FSTM 4203.1
Storage Stability (a)	Increase in Viscosity Seconds, max	15						CEMS GT-3B
	Appearance	Pass						

See page 2 for notes.

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6.2 Dry Film Properties †

DRY FILM PROPERTIES		INTERNATIONAL COLOR DESIGNATION						TEST DESIGNATION (d)
		0001F	0001J	1590G	-	8602G	8240G	
		Black		Brown		Gray		
Initial Gloss at 60 Degrees (a), (e)		30-40	5-15	25-30	-	25-30	25-30	CEMS GT-6B
South Florida Exposure	Gloss, At 60 Degrees After 6 Months, min	50% of Initial Gloss At 60 Degrees						CEMS GT-7F
	Surface Condition After 6 Months	Pass						
	Color Change After 6 Months Exposure and Polish	Pass						
Hiding Power Required, max (a), (b)	mils	1.2						CEMS GT-2B
	µm	30						
Curing Properties on Receipt (a)	30 minutes at 250°F for Grade –29HS and 30 minutes at 310°F for Grade –29THS	Pass						CEMS GT-22
Color Stability (a)		Pass						CEMS GT-4B
Toughness		Pass						CEMS GT-4C
Hardness, min (a)		HB						CEMS GT-4D
Bleeding		Pass						CEMS GT-4J
Adhesion, % min		90						CEMS GT-5A
Intercoat Adhesion	Tape Appearance	Pass						CEMS GT-5B
	Feather Edge Appearance	Pass						
Color (a), (e)		Pass						FSTM 4250
Humidity, 100 Hours Exposure		Pass						CEMS GT-7E
Mar Resistance		Pass						CEMS GT-12

† All paints formulated to this specification must be made with compounds that are lead and chrome free.

(a) Most suitable for acceptance testing.

(b) Cryptometer reading not a requirement unless used for acceptance testing in lieu of the hiding power requirement. This requires that correlation be established between results from the specific cryptometer used and the dry film hiding power results per CEMS GT-2B.

(c) This requirement will be waived if the paint is ordered for spray applications only and the containers are so marked.

(d) All test designations refer to the latest issue unless otherwise stated.

(e) When low gloss enamels are specified, such enamels will meet the initial gloss and color requirements of Federal Standard 515/13 which is available from the General Services Administration, Business Services Center, Washington, D.C. 20407.

6.3 Test Panel Requirements

The number, type, and size of test panels required for each test is described in CEMS Test Method GT-13. Prepare test panels using Method C per CEMS GT-13.

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