



**United States of America  
Department of Homeland Security  
United States Coast Guard**

Certification Date: 05 Sep 2019  
Expiration Date: 05 Sep 2024

# Certificate of Inspection

For ships on international voyages this certificate fulfills the requirements of SOLAS 74 as amended, regulation V/14, for a SAFE MANNING DOCUMENT.

Vessel Name	Official Number	IMO Number	Call Sign	Service
E2MS 315	1292165			Tank Barge

Hailing Port	Hull Material	Horsepower	Propulsion
NEW ORLEANS, LA	Steel		
UNITED STATES			

Place Built	Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
	05Sep2019	18Mar2019	R-1619	R-1619		R-279.5
			-	-		-0

Owner	Operator
E2MS 100, LLC 15635 Jacintoport Blvd. Ste. 202 Houston, TX 77015 UNITED STATES	E SQUARED MARINE SERVICE LLC 16936 Market Street Channelview, TX 77530 UNITED STATES

This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be 0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators.

0 Masters	0 Licensed Mates	0 Chief Engineers	0 Oilers
0 Chief Mates	0 First Class Pilots	0 First Assistant Engineers	
0 Second Mates	0 Radio Officers	0 Second Assistant Engineers	
0 Third Mates	0 Able Seamen	0 Third Assistant Engineers	
0 Master First Class Pilot	0 Ordinary Seamen	0 Licensed Engineers	
0 Mate First Class Pilots	0 Deckhands	0 Qualified Member Engineer	

In addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 0

**Route Permitted And Conditions Of Operation:**  
**---Lakes, Bays, and Sounds---**

Also, in fair weather only, not more than twelve (12) miles from shore between St. Marks and Carrabelle, Florida.

This vessel has been granted a fresh water service examination interval in accordance with 46 CFR Table 31.10-21(b); if this vessel is operated in salt water more than six (6) months in any twelve (12) month period, the vessel must be inspected using salt water intervals and the cognizant OCMI notified in writing as soon as this change in status occurs.

\*\*\*SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION\*\*\*

With this Inspection for Certification having been completed at NEW ORLEANS, LA, UNITED STATES, the Officer in Charge, Marine Inspection, Sector New Orleans certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Re-Inspection				This certificate issued by:  <b>M.N. COCHRAN</b> COMMANDER, by direction Officer in Charge, Marine Inspection Sector New Orleans Inspection Zone
Date	Zone	A/P/R	Signature	



# Certificate of Inspection

Vessel Name: E2MS 315

### ---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	30Sep2029	05Sep2019	
Internal Structure	30Sep2024	05Sep2019	

### --- Liquid/Gas/Solid Cargo Authority/Conditions ---

Authorization: GRADE "A" AND SPECIFIED HAZARDOUS CARGOES.

Total Capacity	Units	Highest Grade Type	Part151 Regulated	Part153 Regulated	Part154 Regulated
29192	Barrel	A	Yes	No	No

#### \*Hazardous Bulk Solids Authority\*

Not Authorized

#### \*Loading Constraints - Structural\*

Tank Number	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1 P/S	862	13.6
2 P/S	874	13.6
3 P/S	763	13.6

#### \*Loading Constraints - Stability\*

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	4012	10ft 5in	13.6	R, LB/S
III	4760	11ft 11in	13.6	R, LB/S

#### \*Conditions Of Carriage\*

\*Conditions of Carriage\*

Only those specified hazardous cargoes named in the vessel's Cargo Authority Attachment (CAA), Serial# C1-1900965, dated 11Apr19, and Grade "A" and lower cargoes may be carried, and then only in the tanks indicated.

Per 46 CFR 150.130, the Person in Charge of the vessel is responsible for ensuring that the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using figures, tables and appendices of 46 CFR 150 in conjunction with the compatibility group numbers from the "COMPAT GRP" column listed in the vessel's CAA.

When the vessel is carrying cargoes containing greater than 0.5% benzene, the Person In Charge is responsible for ensuring the provisions of 46 CFR 197, Subpart C are applied.

#### \*Stability and Trim\*

Cargo tanks must be loaded uniformly whenever a 46 CFR Subchapter "O" cargo is carried; for trim purposes, the weight of cargo in each tank may exceed the uniformly loaded tank cargo weight by at most 5 percent.

The maximum density of cargo which may be filled to the tank top is 8.74 lbs/gal. Cargoes with higher densities, up to 13.6 lbs/gal, may be carried as slack loads, but shall not exceed the tank weight limits as listed above.

#### \*Vapor Control Authorization\*

In accordance with 46 CFR 39, excluding 46 CFR 39.40, this vessel's vapor control system has been inspected to the plans approved by Marine Safety Center letter Serial# C1-1900965 dated 11Apr19 and the list of authorized cargoes on the CAA,



# Certificate of Inspection

Vessel Name: E2MS 315

Serial# C1-1900965 dated 11Apr19, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.

In accordance with 46 CFR Part 39.1017 and 39.5001(e) this vessel's VCS has been evaluated and approved for multi-breasted tandem loading with other vessels specifically approved to tandem load with this vessel.

### --- Inspection Status ---

#### \*Cargo Tanks\*

Tank Id	Internal Exam			External Exam		
	Previous	Last	Next	Previous	Last	Next
1 P/S	-	05Sep2019	30Sep2029	-	-	-
2 P/S	-	05Sep2019	30Sep2029	-	-	-
3 P/S	-	05Sep2019	30Sep2029	-	-	-

#### Hydro Test

Tank Id	Safety Valves	Hydro Test		
		Previous	Last	Next
1 P/S	-	-	-	-
2 P/S	-	-	-	-
3 P/S	-	-	-	-

### --- Fire Fighting Equipment ---

#### \*Fire Extinguishers - Hand portable and semi-portable\*

Quantity	Class Type
2	B-II

\*\*\*END\*\*\*



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

Hull #: 2227-2

### 46 CFR 151 Tank Group Characteristics

Tank Group Information		Cargo Identification			Hull Typ	Tanks			Cargo Transfer		Environmental Control		Fire Protection Provided	Special Requirements				
Tnk Grp	Tanks in Group	Density	Press.	Temp.		Type	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space		General	Materials of Construction	Elec Haz	Temp Cont	
A	#1P/S, #2P/S, #3P/S	13.6	Atmos.	Amb.	II	1ii 2ii	Integral Gravity	PV	Closed	II	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50-81(b).	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g).	NR	No

- Notes: 1. Under Environmental Control, Tanks, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo tanks.  
 2. Under Environmental Control, Handling Space, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo handling space. NA means that the vessel does not have a cargo control space, and this requirement is not applied.  
 3. Under Electrical Hazard Class, NA means that the tank group is suitable only for those cargoes which have no electrical hazard class requirement. NR means that the vessel has no electrical equipment located in a hazardous location.

### List of Authorized Cargoes

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'l's of	Insp. Period	

#### Authorized Subchapter O Cargoes

Sodium acetate solution	SAN	34	D/O 3	#	A	No	N/A			G
Acetonitrile	ATN	37	O	C	III	A	Yes	3	No	G
Acrylonitrile	ACN	15 <sup>2</sup>	O	C	II	A	Yes	4	.50-70(a), .55-1(e)	G
Adiponitrile	ADN	37	O	E	II	A	Yes	1	No	G
Alkyl (C7-C9) nitrates	AKN	34 <sup>2</sup>	O	NA	III	A	No	N/A	.50-81, .50-86	G
Aminoethyl ethanolamine	AEE	8	O	E	III	A	Yes	1	.55-1(b)	G
Ammonium bisulfite solution (70% or less)	ABX	43 <sup>2</sup>	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G
Ammonium hydroxide (28% or less NH3)	AMH	6	O	NA	III	A	No	N/A	.56-1(a), (b), (c), (f), (g)	G
Anthracene oil (Coal tar fraction)	AHO	33	O	NA	II	A	No	N/A	No	G
Benzene	BNZ	32	O	C	III	A	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	BHB	32 <sup>2</sup>	O	C	III	A	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	BHA	32 <sup>2</sup>	O	C	III	A	Yes	1	.50-60, .56-1(b), (d), (f), (g)	G
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	O	B/C	III	A	Yes	1	.50-60	G
Butyl acrylate (all isomers)	BAR	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyl methacrylate	BMH	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyraldehyde (all isomers)	BAE	19	O	C	III	A	Yes	1	.55-1(h)	G
Camphor oil (light)	CPO	18	O	D	II	A	No	N/A	No	G
Carbon tetrachloride	CBT	36	O	NA	III	A	No	N/A	No	G
Caustic potash solution	CPS	5 <sup>2</sup>	O	NA	III	A	No	N/A	.50-73, .55-1(j)	G
Caustic soda solution	CSS	5 <sup>2</sup>	O	NA	III	A	No	N/A	.50-73, .55-1(j)	G
Chlorobenzene	CRB	36	O	D	III	A	Yes	1	No	G
Chloroform	CRF	36	O	NA	III	A	Yes	3	No	G
Coal tar naphtha solvent	NCT	33	O	D	III	A	Yes	1	.50-73	G
Creosote	CCW	21 <sup>2</sup>	O	E	III	A	Yes	1	No	G
Cresols (all isomers)	CRS	21	O	E	III	A	Yes	1	No	G
Cresylate spent caustic	CSC	5	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G
Cresylic acid tar	CRX	21	O	E	III	A	Yes	1	.55-1(f)	G
Crotonaldehyde	CTA	19 <sup>2</sup>	O	C	II	A	Yes	4	.55-1(h)	G
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG	19 <sup>2</sup>	O	C	III	A	Yes	1	No	G
Cyclohexanone	CCH	18	O	D	III	A	Yes	1	.56-1(a), (b)	G
Cyclohexanone, Cyclohexanol mixture	CYX	18 <sup>2</sup>	O	E	III	A	Yes	1	.56-1 (b)	G

\*\*\* This document is only valid when attached to, and referenced by a current, valid Certificate of Inspection. \*\*\*



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage					
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period	
Cyclohexylamine	CHA	7	O	D	III	A	Yes	1	.56-1(a), (b), (c), (g)	G	
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	O	D	III	A	Yes	1	.50-60, .56-1(b)	G	
iso-Decyl acrylate	IAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G	
Dichlorobenzene (all isomers)	DBX	36	O	E	III	A	Yes	3	.56-1(a), (b)	G	
1,1-Dichloroethane	DCH	36	O	C	III	A	Yes	1	No	G	
2,2'-Dichloroethyl ether	DEE	41	O	D	II	A	Yes	1	.55-1(f)	G	
Dichloromethane	DCM	36	O	NA	III	A	Yes	5	No	G	
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 1.2	O	A	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 2	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
1,1-Dichloropropane	DPB	36	O	C	III	A	Yes	3	No	G	
1,2-Dichloropropane	DPP	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropane	DPC	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropene	DPU	15	O	D	II	A	Yes	4	No	G	
Dichloropropene, Dichloropropane mixtures	DMX	15	O	C	II	A	Yes	1	No	G	
Diethanolamine	DEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diethylamine	DEN	7	O	C	III	A	Yes	3	.55-1(c)	G	
Diethylenetriamine	DET	7 2	O	E	III	A	Yes	1	.55-1(c)	G	
Diisobutylamine	DBU	7	O	D	III	A	Yes	3	.55-1(c)	G	
Diisopropanolamine	DIP	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diisopropylamine	DIA	7	O	C	II	A	Yes	3	.55-1(c)	G	
N,N-Dimethylacetamide	DAC	10	O	E	III	A	Yes	3	.56-1(b)	G	
Dimethylethanolamine	DMB	8	O	D	III	A	Yes	1	.56-1(b), (c)	G	
Dimethylformamide	DMF	10	O	D	III	A	Yes	1	.55-1(e)	G	
Di-n-propylamine	DNA	7	O	C	II	A	Yes	3	.55-1(c)	G	
Dodecyl dimethylamine, Tetradecyldimethylamine mixture	DOT	7	O	E	III	A	No	N/A	.56-1(b)	G	
Dodecyl diphenyl ether disulfonate solution	DOS	43	O	#	II	A	No	N/A	No	G	
EE Glycol Ether Mixture	EEG	40	O	D	III	A	No	N/A	No	G	
Ethanolamine	MEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Ethyl acrylate	EAC	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethylamine solutions (72% or less)	EAN	7	O	A	II	A	Yes	6	.55-1(b)	G	
N-Ethylbutylamine	EBA	7	O	D	III	A	Yes	3	.55-1(b)	G	
N-Ethylcyclohexylamine	ECC	7	O	D	III	A	Yes	1	.55-1(b)	G	
Ethylene cyanohydrin	ETC	20	O	E	III	A	Yes	1	No	G	
Ethylenediamine	EDA	7 2	O	D	III	A	Yes	1	.55-1(c)	G	
Ethylene dichloride	EDC	36 2	O	C	III	A	Yes	1	No	G	
Ethylene glycol hexyl ether	EGH	40	O	E	III	A	No	N/A	No	G	
Ethylene glycol monoalkyl ethers	EGC	40	O	D/E	III	A	Yes	1	No	G	
Ethylene glycol propyl ether	EGP	40	O	E	III	A	Yes	1	No	G	
2-Ethylhexyl acrylate	EAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethyl methacrylate	ETM	14	O	D/E	III	A	Yes	2	.50-70(a)	G	
2-Ethyl-3-propylacrolein	EPA	19 2	O	E	III	A	Yes	1	No	G	
Formaldehyde solution (37% to 50%)	FMS	19 2	O	D/E	III	A	Yes	1	.55-1(h)	G	
Furfural	FFA	19	O	D	III	A	Yes	1	.55-1(h)	G	
Glutaraldehyde solutions (50% or less)	GTA	19	O	NA	III	A	No	N/A	No	G	
Hexamethylenediamine solution	HMC	7	O	E	III	A	Yes	1	.55-1(c)	G	
Hexamethyleneimine	HMI	7	O	C	II	A	Yes	1	.56-1(b), (c)	G	



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## Cargo Authority Attachment

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Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage					
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period	
Isoprene	IPR	30	O	A	III	A	Yes	7	.50-70(a), .50-81(a), (b)	G	
Isoprene, Pentadiene mixture	IPN	30	O	B	III	A	No	N/A	.50-70(a), .55-1(c)	G	
Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor)	KPL	5	O	NA	III	A	No	N/A	.50-73, .56-1(e), (c), (g)	G	
Mesityl oxide	MSO	18 <sup>2</sup>	O	D	III	A	Yes	1	No	G	
Methyl acrylate	MAM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Methylcyclopentadiene dimer	MCK	30	O	C	III	A	Yes	1	No	G	
Methyl diethanolamine	MDE	8	O	E	III	A	Yes	1	.56-1(b), (c)	G	
2-Methyl-5-ethyl pyridine	MEP	9	O	E	III	A	Yes	1	.55-1(e)	G	
Methyl methacrylate	MMM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
2-Methylpyridine	MPR	9	O	D	III	A	Yes	3	.55-1(c)	G	
alpha-Methylstyrene	MSR	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Morpholine	MPL	7 <sup>2</sup>	O	D	III	A	Yes	1	.55-1(c)	G	
Nitroethane	NTE	42	O	D	II	A	No	N/A	.50-81, .56-1(b)	G	
1- or 2-Nitropropane	NPM	42	O	D	III	A	Yes	1	.50-81	G	
1,3-Pentadiene	PDE	30	O	A	III	A	Yes	7	.50-70(a), .50-81	G	
Perchloroethylene	PER	36	O	NA	III	A	No	N/A	No	G	
Polyethylene polyamines	PEB	7 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(e)	G	
iso-Propanolamine	MPA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Propanolamine (iso-, n-)	PAX	8	O	E	III	A	Yes	1	.56-1(b), (c)	G	
Isopropylamine	IPP	7	O	A	II	A	Yes	5	.55-1(c)	G	
Pyridine	PRD	9	O	C	III	A	Yes	1	.55-1(e)	G	
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP	5	O		III	A	No	N/A	.50-73, .55-1(f)	G	
Sodium aluminate solution (45% or less)	SAU	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G	
Sodium chlorate solution (50% or less)	SDD	0 <sup>1,2</sup>	O	NA	III	A	No	N/A	.50-73	G	
Sodium hypochlorite solution (20% or less)	SHQ	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b)	G	
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 <sup>1,2</sup>	O	NA	III	A	Yes	1	.50-73, .55-1(b)	G	
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0 <sup>1,2</sup>	O	NA	III	A	No	N/A	.50-73, .56-1(b)	G	
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 <sup>1,2</sup>	O	NA	II	A	No	N/A	.50-73, .55-1(b)	G	
Styrene monomer	STY	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
1,1,2,2-Tetrachloroethane	TEC	36	O	NA	III	A	No	N/A	No	G	
Tetraethylene pentamine	TTP	7	O	E	III	A	Yes	1	.55-1(c)	G	
Tetrahydrofuran	THF	41	O	C	III	A	Yes	1	.50-70(b)	G	
1,2,4-Trichlorobenzene	TCB	36	O	E	III	A	Yes	1	No	G	
1,1,2-Trichloroethane	TCM	36	O	NA	III	A	Yes	1	.50-73, .56-1(a)	G	
Trichloroethylene	TCL	36 <sup>2</sup>	O	NA	III	A	Yes	1	No	G	
1,2,3-Trichloropropane	TCN	36	O	E	II	A	Yes	3	.50-73, .56-1(a)	G	
Triethanolamine	TEA	8 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(b)	G	
Triethylamine	TEN	7	O	C	II	A	Yes	3	.55-1(e)	G	
Triethylenetetramine	TET	7 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(b)	G	
Triphenylborane (10% or less), caustic soda solution	TPB	5	O	NA	III	A	No	N/A	.56-1(a), (b), (c)	G	
Trisodium phosphate solution	TSP	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c)	G	
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	O	NA	III	A	No	N/A	.56-1(b)	G	
Vanillin black liquor (free alkali content, 3% or more).	VLB	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G	
Vinyl acetate	VAM	13	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Vinyl neodecanoate	VND	13	O	E	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G	



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## Cargo Authority Attachment

Vessel Name: **E2MS 315**

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
Vinytoluene	VNT	13	O	D	III	A	Yes	2	.50-70(a), .50-81, .56-1(a), (b), (c), (	G

### Subchapter D Cargoes Authorized for Vapor Control

Acetone	ACT	18 <sup>2</sup>	D	C		A	Yes	1	
Acetophenone	ACP	18	D	E		A	Yes	1	
Alcohol (C6-C17) (secondary) poly(3-6) ethoxylates	AEA	20	D	E		A	Yes	1	
Alcohol (C6-C17) (secondary) poly(7-12) ethoxylates	AEB	20	D	E		A	Yes	1	
Amyl acetate (all isomers)	AEC	34	D	D		A	Yes	1	
Amyl alcohol (iso-, n-, sec-, primary)	AAI	20	D	D		A	Yes	1	
Benzyl acetate	BZE	34	D	E		A	Yes	1	
Benzyl alcohol	BAL	21	D	E		A	Yes	1	
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol moncalkyl(C1-C4) ethers, and their borate esters)	BFY	20	D	E		A	Yes	1	
Butyl acetate (all isomers)	BAX	34	D	D		A	Yes	1	
Isobutyl alcohol	IAL	20 <sup>2</sup>	D	D		A	Yes	1	
Butyl alcohol (n-)	BAN	20 <sup>2</sup>	D	D		A	Yes	1	
Butyl alcohol (sec-)	BAS	20 <sup>2</sup>	D	C		A	Yes	1	
Butyl alcohol (tert-)	BAT	20 <sup>2</sup>	D	C		A	Yes	1	
Butyl benzyl phthalate	BPH	34	D	E		A	Yes	1	
Butyl toluene	BUE	32	D	D		A	Yes	1	
Caprolactam solutions	CLS	22	D	E		A	Yes	1	
Cycloheptane	CYE	31	D	C		A	Yes	1	
Cyclohexane	CHX	31	D	C		A	Yes	1	
Cyclohexanol	CHN	20	D	E		A	Yes	1	
Cyclohexyl acetate	CYC	34	D	D		A	Yes	1	
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		A	Yes	2	
Cyclopentane	CYP	31	D	B		A	Yes	1	
p-Cymene	CMP	32	D	D		A	Yes	1	
iso-Decaldehyde	IDA	19	D	E		A	Yes	1	
n-Decaldehyde	DAL	19	D	E		A	Yes	1	
Decanoic acid	DCO	4	D	#		A	Yes	1	
Decene	DCE	30	D	D		A	Yes	1	
Decyl alcohol (all isomers)	DAX	20 <sup>2</sup>	D	E		A	Yes	1	
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		A	Yes	1	
Diacetone alcohol	DAA	20 <sup>2</sup>	D	D		A	Yes	1	
Dibutyl phthalate	DPA	34	D	E		A	Yes	1	
Diethylbenzene	DEB	32	D	D		A	Yes	1	
Diethylene glycol	DEG	40 <sup>2</sup>	D	E		A	Yes	1	
Diisobutylene	DBL	30	D	C		A	Yes	1	
Diisobutyl ketone	DIK	18	D	D		A	Yes	1	



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
Diisopropylbenzene (all isomers)	DIX	32	D	E		A	Yes	1		
Dimethyl phthalate	DTL	34	D	E		A	Yes	1		
Diocetyl phthalate	DOP	34	D	E		A	Yes	1		
Dipentene	DPN	30	D	D		A	Yes	1		
Diphenyl	DIL	32	D	D/E		A	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO	33	D	E		A	Yes	1		
Diphenyl ether	DPE	41	D	{E}		A	Yes	1		
Dipropylene glycol	DPG	40	D	E		A	Yes	1		
Distillates: Flashed feed stocks	DFF	33	D	E		A	Yes	1		
Distillates: Straight run	DSR	33	D	E		A	Yes	1		
Dodecene (all isomers)	DOZ	30	D	D		A	Yes	1		
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	E		A	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		A	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		A	Yes	1		
Ethyl acetate	ETA	34	D	C		A	Yes	1		
Ethyl acetoacetate	EAA	34	D	E		A	Yes	1		
Ethyl alcohol	EAL	20 <sup>2</sup>	D	C		A	Yes	1		
Ethylbenzene	ETB	32	D	C		A	Yes	1		
Ethyl butanol	EBT	20	D	D		A	Yes	1		
Ethyl tert-butyl ether	EBE	41	D	C		A	Yes	1		
Ethyl butyrate	EBR	34	D	D		A	Yes	1		
Ethyl cyclohexane	ECY	31	D	D		A	Yes	1		
Ethylene glycol	EGL	20 <sup>2</sup>	D	E		A	Yes	1		
Ethylene glycol butyl ether acetate	EMA	34	D	E		A	Yes	1		
Ethylene glycol diacetate	EGY	34	D	E		A	Yes	1		
Ethylene glycol phenyl ether	EPE	40	D	E		A	Yes	1		
Ethyl-3-ethoxypropionate	EEP	34	D	D		A	Yes	1		
2-Ethylhexanol	EHX	20	D	E		A	Yes	1		
Ethyl propionate	EPR	34	D	C		A	Yes	1		
Ethyl toluene	ETE	32	D	D		A	Yes	1		
Formamide	FAM	10	D	E		A	Yes	1		
Furfuryl alcohol	FAL	20 <sup>2</sup>	D	E		A	Yes	1		
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		A	Yes	1		
Gasoline blending stocks: Reformates	GRF	33	D	A/C		A	Yes	1		
Gasolines: Automotive (containing not over 4.23 grams lead per	GAT	33	D	C		A	Yes	1		
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	33	D	C		A	Yes	1		
Gasolines: Casinghead (natural)	GCS	33	D	A/C		A	Yes	1		
Gasolines: Polymer	GPL	33	D	A/C		A	Yes	1		
Gasolines: Straight run	GSR	33	D	A/C		A	Yes	1		
Glycerine	GCR	20 <sup>2</sup>	D	E		A	Yes	1		

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
							App'd (Y or N)	VCS Category		
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	HMX	31	D	C		A	Yes	1		
n-Heptanoic acid	HEN	4	D	E		A	Yes	1		
Heptanol (all isomers)	HTX	20	D	D/E		A	Yes	1		
Heptene (all isomers)	HPX	30	D	C		A	Yes	2		
Heptyl acetate	HPE	34	D	E		A	Yes	1		
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 <sup>2</sup>	D	B/C		A	Yes	1		
Hexanoic acid	HXO	4	D	E		A	Yes	1		
Hexanol	HXN	20	D	D		A	Yes	1		
Hexene (all isomers)	HEX	30	D	C		A	Yes	2		
Hexylene glycol	HXG	20	D	E		A	Yes	1		
Isophorone	IPH	18 <sup>2</sup>	D	E		A	Yes	1		
Jet fuel: JP-4	JPF	33	D	E		A	Yes	1		
Jet fuel: JP-5 (kerosene, heavy)	JPV	33	D	D		A	Yes	1		
Kerosene	KRS	33	D	D		A	Yes	1		
Methyl acetate	MTT	34	D	D		A	Yes	1		
Methyl alcohol	MAL	20 <sup>2</sup>	D	C		A	Yes	1		
Methylamyl acetate	MAC	34	D	D		A	Yes	1		
Methylamyl alcohol	MAA	20	D	D		A	Yes	1		
Methyl amyl ketone	MAK	18	D	D		A	Yes	1		
Methyl tert-butyl ether	MBE	41 <sup>2</sup>	D	C		A	Yes	1		
Methyl butyl ketone	MBK	18	D	C		A	Yes	1		
Methyl butyrate	MBU	34	D	C		A	Yes	1		
Methylcyclohexane	MCY	31	D	C		A	Yes	1		
Methyl ethyl ketone	MEK	18 <sup>2</sup>	D	C		A	Yes	1		
Methyl heptyl ketone	MHK	18	D	D		A	Yes	1		
Methyl isobutyl ketone	MIK	18 <sup>2</sup>	D	C		A	Yes	1		
Mineral spirits	MNS	33	D	D		A	Yes	1		
Myrcene	MRE	30	D	D		A	Yes	1		
Naphtha: Heavy	NAG	33	D	#		A	Yes	1		
Naphtha: Petroleum	PTN	33	D	#		A	Yes	1		
Naphtha: Solvent	NSV	33	D	D		A	Yes	1		
Naphtha: Stoddard solvent	NSS	33	D	D		A	Yes	1		
Naphtha: Varnish makers and painters (75%)	NVM	33	D	C		A	Yes	1		
Nonane (all isomers), see Alkanes (C6-C9)	NAX	31	D	D		A	Yes	1		
Nonene (all isomers)	NON	30	D	D		A	Yes	2		
Nonyl alcohol (all isomers)	NNS	20 <sup>2</sup>	D	E		A	Yes	1		
Nonyl phenol	NNP	21	D	E		A	Yes	1		
Nonyl phenol poly(4+)ethoxylates	NPE	40	D	E		A	Yes	1		
Octane (all isomers), see Alkanes (C6-C9)	OAX	31	D	C		A	Yes	1		
Octanoic acid (all isomers)	OAY	4	D	E		A	Yes	1		

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## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
Octanol (all isomers)	OCX	20 <sup>2</sup>	D	E		A	Yes	1		
Octene (all isomers)	OTX	30	D	C		A	Yes	2		
Oil, fuel: No. 2	OTW	33	D	D/E		A	Yes	1		
Oil, fuel: No. 2-D	OTD	33	D	D		A	Yes	1		
Oil, fuel: No. 4	OFR	33	D	D/E		A	Yes	1		
Oil, fuel: No. 6	OSX	33	D	E		A	Yes	1		
Oil, misc: Crude	OIL	33	D	A/D		A	Yes	1		
Oil, misc: Diesel	ODS	33	D	D/E		A	Yes	1		
Oil, misc: Gas, high pour	OGP	33	D	E		A	Yes	1		
Oil, misc: Lubricating	OLB	33	D	E		A	Yes	1		
Oil, misc: Residual	ORL	33	D	E		A	Yes	1		
Oil, misc: Turbine	OTB	33	D	E		A	Yes	1		
Pentane (all isomers)	PTY	31	D	A		A	Yes	5		
Pentene (all isomers)	PTX	30	D	A		A	Yes	5		
n-Pentyl propionate	PPE	34	D	D		A	Yes	1		
alpha-Pinene	PIO	30	D	D		A	Yes	1		
beta-Pinene	PIP	30	D	D		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether	PAG	40	D	E		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	PAF	34	D	E		A	Yes	1		
Polybutene	PLB	30	D	E		A	Yes	1		
Polypropylene glycol	PGC	40	D	E		A	Yes	1		
Isopropyl acetate	IAC	34	D	C		A	Yes	1		
n-Propyl acetate	PAT	34	D	C		A	Yes	1		
Isopropyl alcohol	IPA	20 <sup>2,3</sup>	D	C		A	Yes	1		
n-Propyl alcohol	PAL	20 <sup>2</sup>	D	C		A	Yes	1		
Propylbenzene (all isomers)	PBY	32	D	D		A	Yes	1		
Isopropylcyclohexane	IPX	31	D	D		A	Yes	1		
Propylene glycol	PPG	20 <sup>2</sup>	D	E		A	Yes	1		
Propylene glycol methyl ether acetate	PGN	34	D	D		A	Yes	1		
Propylene tetramer	PTT	30	D	D		A	Yes	1		
Sulfolane	SFL	39	D	E		A	Yes	1		
Tetraethylene glycol	TTG	40	D	E		A	Yes	1		
Tetrahydronaphthalene	THN	32	D	E		A	Yes	1		
Toluene	TOL	32	D	C		A	Yes	1		
Tricresyl phosphate (containing less than 1% ortho isomer)	TCP	34	D	E		A	Yes	1		
Triethylbenzene	TEB	32	D	E		A	Yes	1		
Triethylene glycol	TEG	40	D	E		A	Yes	1		
Triethyl phosphate	TPS	34	D	E		A	Yes	1		
Trimethylbenzene (all isomers)	TRE	32	D	{D}		A	Yes	1		
Trixylyl phosphate	TRP	34	D	E		A	Yes	1		

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 315**

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
1-Undecene	UDC	30	D	D/E		A	Yes	1		
1-Undecyl alcohol	UND	20	D	E		A	Yes	1		
Xylenes (ortho-, meta-, para-)	XLX	32	D	D		A	Yes	1		



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 315**  
Official #: 1292165

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Shipyard: ARCOSA MAD  
Hull #: 2227-2

### Explanation of terms & symbols used in the Table:

#### Cargo Identification

Name	The proper shipping name as listed in 46 CFR Table 30.25-1, 46 CFR Table 151.05, and 46 CFR Part 153 Table 2.
Chem Code none	The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual. Certain mixtures of cargoes may not have a CHRIS Code assigned.
Compatability Group No.	The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.
Note 1	Because of the very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 372-1425.
Note 2	See Appendix I to 46 CFR Part 150 - exceptions to the compatibility chart.
Subchapter	The subchapter in Title 46 Code of Federal Regulations under which the cargo has been classified.
Subchapter D	Those flammable and combustible liquids listed in 46 CFR Table 30.25-1.
Subchapter O	Those hazardous cargoes listed in 46 CFR Table 151.05 and 46 CFR Part 153 Table 2.
Note 3	Those cargoes listed in 46 CFR Part 153 Table 2 are non-regulated cargoes when carried in bulk on non-oceangoing barges.
Grade	The cargo classification assigned to each flammable or combustible liquid. Grades inside of "[ ]" indicate a provisional assignment based upon literature sources which were not verified by manufacturers data. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.
A, B, C	Flammable liquid cargoes, as defined in 46 CFR 30-10.22.
D, E	Combustible liquid cargoes, as defined in 46 CFR 30-10.15.
Note 4	The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.
NA	Those subchapter O cargoes which are not classified as a flammable or combustible liquid.
#	No flammability/combustibility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.
Hull Type	The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1.
I	Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1).
II	Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3).
III	Designed to carry products of sufficient hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).
NA	Not applicable to barges certificated under Subchapter D.

#### Conditions of Carriage

Tank Group	The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo.
Vapor Recovery	Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo.
Approved (Y or N)	No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.

#### Conditions of Carriage

Tank Group	The vessel's tank group (as defined under the "46 CFR Tank Group Characteristics" listed on page 1) which is authorized for carriage of the named cargo.
Vapor Recovery	Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo.
Approved (Y or N)	No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.

#### VCS Category:

Category 1	The specified cargo's provisional classification for vapor control systems. (No additional VCS requirements above those for benzene, gasolines and crude oil) All requirements applying to the handling of oil and hazardous materials in Titles 33 and 46 Code of Federal Regulations (CFR) apply to these cargoes. Those specifically dealing with vapor control systems are in 33 CFR 155.750, 33 CFR 156.120, 33 CFR 156.170, 46 CFR 35.35 and 46 CFR 39. The cargo tank venting system calculations (46 CFR 39.20-1i) and the pressure drop calculations (46 CFR 39.30-1(b)) must use appropriate friction factors, vapor densities and vapor growth rates.
Category 2	(Polymerizes) Polymerization and residue build-up of these cargoes can adversely affect the vessel by fouling safety components and restricting vapor flow which could lead to cargo tank overpressurization. The vessel's owner must develop a method of ensuring all VCS safety components are functional and polymer build-up is not causing an unsafe condition due to increased pressure in the vapor control piping and cargo tanks. The method shall be acceptable to the local Officer in Charge, Marine Inspection. This is in addition to the requirements of Category 1. Please note that a material not normally considered a monomer can be a problem in detonation arrester.
Category 3	(Highly toxic) VCSs for these toxic cargoes cannot use a spill valve or rupture disk as the primary means to meet the overfill protection requirement of 46 CFR 39.20-9. This requirement is in addition to the requirements of Category 1.
Category 4	(Polymerizes and highly toxic) Must comply with requirements of Categories 1, 2 and 3.
Category 5	(High vapor pressure) VCS pressure drop calculations for cargoes with a vapor pressure greater than 14.7 psia at 115 F must take into account increased vapor-air mixture densities and vapor growth rates as compared to Category 1 cargoes. Consult the Marine Safety Center's VCS Guidelines for further information. This requirement is in addition to the requirements of Category 1.
Category 6	(High vapor pressure and highly toxic) Must comply with requirements of Categories 1, 3 and 5.
Category 7	(High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5.
none	The cargo has not been evaluated/classified for use in vapor control systems.



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

Hull #: 2227-2

### 46 CFR 151 Tank Group Characteristics

Tank Group Information		Cargo Identification			Tanks				Cargo Transfer		Environmental Control		Fire Protection Provided	Special Requirements		Elec Haz	Temp Cont	
Tnk Grp	Tanks in Group	Density	Press.	Temp.	Hull Type	Cargo Seg Tank	Type	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space	General	Materials of Construction			
A	#1P/S, #2P/S, #3P/S	13.6	Atmos.	Amb.	II	1ii 2ii	Integral Gravity	PV	Closed	II	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50-81(b).	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g).	NR	No

- Notes: 1. Under Environmental Control, Tanks, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo tanks.  
 2. Under Environmental Control, Handling Space, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo handling space. NA means that the vessel does not have a cargo control space, and this requirement is not applied.  
 3. Under Electrical Hazard Class, NA means that the tank group is suitable only for those cargoes which have no electrical hazard class requirement. NR means that the vessel has no electrical equipment located in a hazardous location.

### List of Authorized Cargoes

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period	
							App'd (Y or N)	VCS Category			

#### Authorized Subchapter O Cargoes

Sodium acetate solution	SAN	34	D/O 3	#		A	No	N/A		G
Acetonitrile	ATN	37	O	C	III	A	Yes	3	No	G
Acrylonitrile	ACN	15 2	O	C	II	A	Yes	4	.50-70(a), .55-1(e)	G
Adiponitrile	ADN	37	O	E	II	A	Yes	1	No	G
Alkyl (C7-C9) nitrates	AKN	34 2	O	NA	III	A	No	N/A	.50-81, .50-85	G
Aminoethyl ethanolamine	AEE	8	O	E	III	A	Yes	1	.55-1(b)	G
Ammonium bisulfite solution (70% or less)	ABX	43 2	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G
Ammonium hydroxide (28% or less NH3)	AMH	6	O	NA	III	A	No	N/A	.56-1(a), (b), (c), (f), (g)	G
Anthracene oil (Coal tar fraction)	AHO	33	O	NA	II	A	No	N/A	No	G
Benzene	BNZ	32	O	C	III	A	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	BHB	32 2	O	C	III	A	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	BHA	32 2	O	C	III	A	Yes	1	.50-60, .56-1(b), (d), (f), (g)	G
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	O	B/C	III	A	Yes	1	.50-60	G
Butyl acrylate (all isomers)	BAR	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyl methacrylate	BMH	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyraldehyde (all isomers)	BAE	19	O	C	III	A	Yes	1	.55-1(h)	G
Camphor oil (light)	CPO	18	O	D	II	A	No	N/A	No	G
Carbon tetrachloride	CBT	36	O	NA	III	A	No	N/A	No	G
Caustic potash solution	CPS	5 2	O	NA	III	A	No	N/A	.50-73, .55-1(i)	G
Caustic soda solution	CSS	5 2	O	NA	III	A	No	N/A	.50-73, .55-1(i)	G
Chlorobenzene	CRB	36	O	D	III	A	Yes	1	No	G
Chloroform	CRF	36	O	NA	III	A	Yes	3	No	G
Coal tar naphtha solvent	NCT	33	O	D	III	A	Yes	1	.50-73	G
Creosote	CCW	21 2	O	E	III	A	Yes	1	No	G
Cresols (all isomers)	CRS	21	O	E	III	A	Yes	1	No	G
Cresylate spent caustic	CSC	5	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G
Cresylic acid tar	CRX	21	O	E	III	A	Yes	1	.55-1(f)	G
Crotonaldehyde	CTA	19 2	O	C	II	A	Yes	4	.55-1(h)	G
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG	19 2	O	C	III	A	Yes	1	No	G
Cyclohexanone	OCH	18	O	D	III	A	Yes	1	.56-1(a), (b)	G
Cyclohexanone, Cyclohexanol mixture	CYX	18 2	O	E	III	A	Yes	1	.56-1 (b)	G

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage					
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period	
Cyclohexylamine	CHA	7	O	D	III	A	Yes	1	.56-1(a), (b), (c), (g)	G	
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	O	D	III	A	Yes	1	.50-60, .56-1(b)	G	
iso-Decyl acrylate	IAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G	
Dichlorobenzene (all isomers)	DBX	36	O	E	III	A	Yes	3	.56-1(a), (b)	G	
1,1-Dichloroethane	DCH	36	O	C	III	A	Yes	1	No	G	
2,2'-Dichloroethyl ether	DEE	41	O	D	II	A	Yes	1	.55-1(f)	G	
Dichloromethane	DCM	36	O	NA	III	A	Yes	5	No	G	
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 <sup>1,2</sup>	O	A	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 <sup>2</sup>	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
1,1-Dichloropropane	DPB	36	O	C	III	A	Yes	3	No	G	
1,2-Dichloropropane	DPP	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropane	DPC	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropene	DPU	15	O	D	II	A	Yes	4	No	G	
Dichloropropene, Dichloropropane mixtures	DMX	15	O	C	II	A	Yes	1	No	G	
Diethanolamine	DEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diethylamine	DEN	7	O	C	III	A	Yes	3	.55-1(c)	G	
Diethylenetriamine	DET	7 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(c)	G	
Diisobutylamine	DBU	7	O	D	III	A	Yes	3	.55-1(c)	G	
Diisopropanolamine	DIP	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diisopropylamine	DIA	7	O	C	II	A	Yes	3	.55-1(c)	G	
N,N-Dimethylacetamide	DAC	10	O	E	III	A	Yes	3	.56-1(b)	G	
Dimethylethanolamine	DMB	8	O	D	III	A	Yes	1	.56-1(b), (c)	G	
Dimethylformamide	DMF	10	O	D	III	A	Yes	1	.55-1(e)	G	
Di-n-propylamine	DNA	7	O	C	II	A	Yes	3	.55-1(c)	G	
Dodecyl dimethylamine, Tetradecyldimethylamine mixture	DOT	7	O	E	III	A	No	N/A	.56-1(b)	G	
Dodecyl diphenyl ether disulfonate solution	DOS	43	O	#	II	A	No	N/A	No	G	
EE Glycol Ether Mixture	EEG	40	O	D	III	A	No	N/A	No	G	
Ethanolamine	MEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Ethyl acrylate	EAC	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethylamine solutions (72% or less)	EAN	7	O	A	II	A	Yes	6	.55-1(b)	G	
N-Ethylbutylamine	EBA	7	O	D	III	A	Yes	3	.55-1(b)	G	
N-Ethylcyclohexylamine	ECC	7	O	D	III	A	Yes	1	.55-1(b)	G	
Ethylene cyanohydrin	ETC	20	O	E	III	A	Yes	1	No	G	
Ethylenediamine	EDA	7 <sup>2</sup>	O	D	III	A	Yes	1	.55-1(c)	G	
Ethylene dichloride	EDC	36 <sup>2</sup>	O	C	III	A	Yes	1	No	G	
Ethylene glycol hexyl ether	EGH	40	O	E	III	A	No	N/A	No	G	
Ethylene glycol monoalkyl ethers	EGC	40	O	D/E	III	A	Yes	1	No	G	
Ethylene glycol propyl ether	EGP	40	O	E	III	A	Yes	1	No	G	
2-Ethylhexyl acrylate	EAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethyl methacrylate	ETM	14	O	D/E	III	A	Yes	2	.50-70(a)	G	
2-Ethyl-3-propylacrolein	EPA	19 <sup>2</sup>	O	E	III	A	Yes	1	No	G	
Formaldehyde solution (37% to 50%)	FMS	19 <sup>2</sup>	O	D/E	III	A	Yes	1	.55-1(h)	G	
Furfural	FFA	19	O	D	III	A	Yes	1	.55-1(h)	G	
Glutaraldehyde solutions (50% or less)	GTA	19	O	NA	III	A	No	N/A	No	G	
Hexamethylenediamine solution	HMC	7	O	E	III	A	Yes	1	.55-1(c)	G	
Hexamethyleneimine	HMI	7	O	C	II	A	Yes	1	.56-1(b), (c)	G	

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period	
Isoprene	IPR	30	O	A	III	A	Yes	7	.50-70(a), .50-81(a), (b)	G	
Isoprene, Pentadiene mixture	IPN	30	O	B	III	A	No	N/A	.50-70(a), .55-1(c)	G	
Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor)	KPL	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G	
Mesityl oxide	MSO	18 <sup>2</sup>	O	D	III	A	Yes	1	No	G	
Methyl acrylate	MAM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Methylcyclopentadiene dimer	MCK	30	O	C	III	A	Yes	1	No	G	
Methyl diethanolamine	MDE	8	O	E	III	A	Yes	1	.56-1(b), (c)	G	
2-Methyl-5-ethyl pyridine	MEP	9	O	E	III	A	Yes	1	.55-1(e)	G	
Methyl methacrylate	MMM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
2-Methylpyridine	MPR	9	O	D	III	A	Yes	3	.55-1(c)	G	
alpha-Methylstyrene	MSR	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Morpholine	MPL	7 <sup>2</sup>	O	D	III	A	Yes	1	.55-1(e)	G	
Nitroethane	NTE	42	O	D	II	A	No	N/A	.50-81, .56-1(b)	G	
1- or 2-Nitropropane	NPM	42	O	D	III	A	Yes	1	.50-81	G	
1,3-Pentadiene	PDE	30	O	A	III	A	Yes	7	.50-70(a), .50-81	G	
Perchloroethylene	PER	36	O	NA	III	A	No	N/A	No	G	
Polyethylene polyamines	PEB	7 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(e)	G	
iso-Propanolamine	MPA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Propanolamine (iso-, n-)	PAX	8	O	E	III	A	Yes	1	.56-1(b), (c)	G	
Isopropylamine	IPP	7	O	A	II	A	Yes	5	.55-1(c)	G	
Pyridine	PRD	9	O	C	III	A	Yes	1	.55-1(e)	G	
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP	5	O		III	A	No	N/A	.50-73, .55-1(j)	G	
Sodium aluminate solution (45% or less)	SAU	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G	
Sodium chlorate solution (50% or less)	SDD	0 <sup>1,2</sup>	O	NA	III	A	No	N/A	.50-73	G	
Sodium hypochlorite solution (20% or less)	SHQ	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b)	G	
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 <sup>1,2</sup>	O	NA	III	A	Yes	1	.50-73, .55-1(b)	G	
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0 <sup>1,2</sup>	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G	
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 <sup>1,2</sup>	O	NA	II	A	No	N/A	.50-73, .55-1(b)	G	
Styrene monomer	STY	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
1,1,2,2-Tetrachloroethane	TEC	36	O	NA	III	A	No	N/A	No	G	
Tetraethylene pentamine	TTP	7	O	E	III	A	Yes	1	.55-1(c)	G	
Tetrahydrofuran	THF	41	O	C	III	A	Yes	1	.50-70(b)	G	
1,2,4-Trichlorobenzene	TCB	36	O	E	III	A	Yes	1	No	G	
1,1,2-Trichloroethane	TCM	36	O	NA	III	A	Yes	1	.50-73, .56-1(a)	G	
Trichloroethylene	TCL	36 <sup>2</sup>	O	NA	III	A	Yes	1	No	G	
1,2,3-Trichloropropane	TCN	36	O	E	II	A	Yes	3	.50-73, .56-1(a)	G	
Triethanolamine	TEA	8 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(b)	G	
Triethylamine	TEN	7	O	C	II	A	Yes	3	.55-1(e)	G	
Triethylenetetramine	TET	7 <sup>2</sup>	O	E	III	A	Yes	1	.55-1(b)	G	
Triphenylborane (10% or less), caustic soda solution	TPB	5	O	NA	III	A	No	N/A	.56-1(a), (b), (c)	G	
Trisodium phosphate solution	TSP	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c)	G	
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	O	NA	III	A	No	N/A	.56-1(b)	G	
Vanillin black liquor (free alkali content, 3% or more).	VLB	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G	
Vinyl acetate	VAM	13	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Vinyl neodecanoate	VND	13	O	E	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G	



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
Vinyltoluene	VNT	13	O	D	III	A	Yes	2	.50-70(a), .50-81, .56-1(a), (b), (c), (	G

### Subchapter D Cargoes Authorized for Vapor Control

Acetone	ACT	18 <sup>2</sup>	D	C		A	Yes	1		
Acetophenone	ACP	18	D	E		A	Yes	1		
Alcohol (C6-C17) (secondary) poly(3-6) ethoxylates	AEA	20	D	E		A	Yes	1		
Alcohol (C6-C17) (secondary) poly(7-12) ethoxylates	AEB	20	D	E		A	Yes	1		
Amyl acetate (all isomers)	AEC	34	D	D		A	Yes	1		
Amyl alcohol (iso-, n-, sec-, primary)	AAI	20	D	D		A	Yes	1		
Benzyl acetate	BZE	34	D	E		A	Yes	1		
Benzyl alcohol	BAL	21	D	E		A	Yes	1		
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and their borate esters)	BFY	20	D	E		A	Yes	1		
Butyl acetate (all isomers)	BAX	34	D	D		A	Yes	1		
Isobutyl alcohol	IAL	20 <sup>2</sup>	D	D		A	Yes	1		
Butyl alcohol (n-)	BAN	20 <sup>2</sup>	D	D		A	Yes	1		
Butyl alcohol (sec-)	BAS	20 <sup>2</sup>	D	C		A	Yes	1		
Butyl alcohol (tert-)	BAT	20 <sup>2</sup>	D	C		A	Yes	1		
Butyl benzyl phthalate	BPH	34	D	E		A	Yes	1		
Butyl toluene	BUE	32	D	D		A	Yes	1		
Caprolactam solutions	CLS	22	D	E		A	Yes	1		
Cycloheptane	CYE	31	D	C		A	Yes	1		
Cyclohexane	CHX	31	D	C		A	Yes	1		
Cyclohexanol	CHN	20	D	E		A	Yes	1		
Cyclohexyl acetate	CYC	34	D	D		A	Yes	1		
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		A	Yes	2		
Cyclopentane	CYP	31	D	B		A	Yes	1		
p-Cymene	CMP	32	D	D		A	Yes	1		
iso-Decaldehyde	IDA	19	D	E		A	Yes	1		
n-Decaldehyde	DAL	19	D	E		A	Yes	1		
Decanoic acid	DCO	4	D	#		A	Yes	1		
Decene	DCE	30	D	D		A	Yes	1		
Decyl alcohol (all isomers)	DAX	20 <sup>2</sup>	D	E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		A	Yes	1		
Diacetone alcohol	DAA	20 <sup>2</sup>	D	D		A	Yes	1		
Dibutyl phthalate	DPA	34	D	E		A	Yes	1		
Diethylbenzene	DEB	32	D	D		A	Yes	1		
Diethylene glycol	DEG	40 <sup>2</sup>	D	E		A	Yes	1		
Diisobutylene	DBL	30	D	C		A	Yes	1		
Diisobutyl ketone	DIK	18	D	D		A	Yes	1		





# Certificate of Inspection

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Vessel Name: E2MS 315

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MADISONVILLE

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
							App'd (Y or N)	VCS Category		
Diisopropylbenzene (all isomers)	DIX	32	D	E		A	Yes	1		
Dimethyl phthalate	DTL	34	D	E		A	Yes	1		
Dioctyl phthalate	DOP	34	D	E		A	Yes	1		
Dipentene	DPN	30	D	D		A	Yes	1		
Diphenyl	DIL	32	D	D/E		A	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO	33	D	E		A	Yes	1		
Diphenyl ether	DPE	41	D	(E)		A	Yes	1		
Dipropylene glycol	DPG	40	D	E		A	Yes	1		
Distillates: Flashed feed stocks	DFF	33	D	E		A	Yes	1		
Distillates: Straight run	DSR	33	D	E		A	Yes	1		
Dodecene (all isomers)	DOZ	30	D	D		A	Yes	1		
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	E		A	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		A	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		A	Yes	1		
Ethyl acetate	ETA	34	D	C		A	Yes	1		
Ethyl acetoacetate	EAA	34	D	E		A	Yes	1		
Ethyl alcohol	EAL	20 <sup>2</sup>	D	C		A	Yes	1		
Ethylbenzene	ETB	32	D	C		A	Yes	1		
Ethyl butanol	EBT	20	D	D		A	Yes	1		
Ethyl tert-butyl ether	EBE	41	D	C		A	Yes	1		
Ethyl butyrate	EBR	34	D	D		A	Yes	1		
Ethyl cyclohexane	ECY	31	D	D		A	Yes	1		
Ethylene glycol	EGL	20 <sup>2</sup>	D	E		A	Yes	1		
Ethylene glycol butyl ether acetate	EMA	34	D	E		A	Yes	1		
Ethylene glycol diacetate	EGY	34	D	E		A	Yes	1		
Ethylene glycol phenyl ether	EPE	40	D	E		A	Yes	1		
Ethyl-3-ethoxypropionate	EEP	34	D	D		A	Yes	1		
2-Ethylhexanol	EHX	20	D	E		A	Yes	1		
Ethyl propionate	EPR	34	D	C		A	Yes	1		
Ethyl toluene	ETE	32	D	D		A	Yes	1		
Formamide	FAM	10	D	E		A	Yes	1		
Furfuryl alcohol	FAL	20 <sup>2</sup>	D	E		A	Yes	1		
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		A	Yes	1		
Gasoline blending stocks: Reformates	GRF	33	D	A/C		A	Yes	1		
Gasolines: Automotive (containing not over 4.23 grams lead per	GAT	33	D	C		A	Yes	1		
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	33	D	C		A	Yes	1		
Gasolines: Casinghead (natural)	GCS	33	D	A/C		A	Yes	1		
Gasolines: Polymer	GPL	33	D	A/C		A	Yes	1		
Gasolines: Straight run	GSR	33	D	A/C		A	Yes	1		
Glycerine	GCR	20 <sup>2</sup>	D	E		A	Yes	1		

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## Cargo Authority Attachment

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MADISONVILLE

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Hull #: 2227-2

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period	
							App'd (Y or N)	VCS Category			
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	HMX	31	D	C		A	Yes	1			
n-Heptanoic acid	HEN	4	D	E		A	Yes	1			
Heptanol (all isomers)	HTX	20	D	D/E		A	Yes	1			
Heptene (all isomers)	HPX	30	D	C		A	Yes	2			
Heptyl acetate	HPE	34	D	E		A	Yes	1			
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 <sup>2</sup>	D	B/C		A	Yes	1			
Hexanoic acid	HXO	4	D	E		A	Yes	1			
Hexanol	HXN	20	D	D		A	Yes	1			
Hexene (all isomers)	HEX	30	D	C		A	Yes	2			
Hexylene glycol	HXG	20	D	E		A	Yes	1			
Isophorone	IPH	18 <sup>2</sup>	D	E		A	Yes	1			
Jet fuel: JP-4	JPF	33	D	E		A	Yes	1			
Jet fuel: JP-5 (kerosene, heavy)	JPV	33	D	D		A	Yes	1			
Kerosene	KRS	33	D	D		A	Yes	1			
Methyl acetate	MTT	34	D	D		A	Yes	1			
Methyl alcohol	MAL	20 <sup>2</sup>	D	C		A	Yes	1			
Methylamyl acetate	MAC	34	D	D		A	Yes	1			
Methylamyl alcohol	MAA	20	D	D		A	Yes	1			
Methyl amyl ketone	MAK	18	D	D		A	Yes	1			
Methyl tert-butyl ether	MBE	41 <sup>2</sup>	D	C		A	Yes	1			
Methyl butyl ketone	MBK	18	D	C		A	Yes	1			
Methyl butyrate	MBU	34	D	C		A	Yes	1			
Methylcyclohexane	MCY	31	D	C		A	Yes	1			
Methyl ethyl ketone	MEK	18 <sup>2</sup>	D	C		A	Yes	1			
Methyl heptyl ketone	MHK	18	D	D		A	Yes	1			
Methyl isobutyl ketone	MIK	18 <sup>2</sup>	D	C		A	Yes	1			
Mineral spirits	MNS	33	D	D		A	Yes	1			
Myrcene	MRE	30	D	D		A	Yes	1			
Naphtha: Heavy	NAG	33	D	#		A	Yes	1			
Naphtha: Petroleum	PTN	33	D	#		A	Yes	1			
Naphtha: Solvent	NSV	33	D	D		A	Yes	1			
Naphtha: Stoddard solvent	NSS	33	D	D		A	Yes	1			
Naphtha: Varnish makers and painters (75%)	NVM	33	D	C		A	Yes	1			
Nonane (all isomers), see Alkanes (C6-C9)	NAX	31	D	D		A	Yes	1			
Nonene (all isomers)	NON	30	D	D		A	Yes	2			
Nonyl alcohol (all isomers)	NNS	20 <sup>2</sup>	D	E		A	Yes	1			
Nonyl phenol	NNP	21	D	E		A	Yes	1			
Nonyl phenol poly(4+)ethoxylates	NPE	40	D	E		A	Yes	1			
Octane (all isomers), see Alkanes (C6-C9)	OAX	31	D	C		A	Yes	1			
Octanoic acid (all isomers)	OAY	4	D	E		A	Yes	1			

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

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Hull #: 2227-2

Cargo Identification						Conditions of Carriage				
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Octanol (all isomers)	OCX	20 <sup>2</sup>	D	E		A	Yes	1		
Octene (all isomers)	OTX	30	D	C		A	Yes	2		
Oil, fuel: No. 2	OTW	33	D	D/E		A	Yes	1		
Oil, fuel: No. 2-D	OTD	33	D	D		A	Yes	1		
Oil, fuel: No. 4	OFR	33	D	D/E		A	Yes	1		
Oil, fuel: No. 6	OSX	33	D	E		A	Yes	1		
Oil, misc: Crude	OIL	33	D	A/D		A	Yes	1		
Oil, misc: Diesel	ODS	33	D	D/E		A	Yes	1		
Oil, misc: Gas, high pour	OGP	33	D	E		A	Yes	1		
Oil, misc: Lubricating	OLB	33	D	E		A	Yes	1		
Oil, misc: Residual	ORL	33	D	E		A	Yes	1		
Oil, misc: Turbine	OTB	33	D	E		A	Yes	1		
Pentane (all isomers)	PTY	31	D	A		A	Yes	5		
Pentene (all isomers)	PTX	30	D	A		A	Yes	5		
n-Pentyl propionate	PPE	34	D	D		A	Yes	1		
alpha-Pinene	PIO	30	D	D		A	Yes	1		
beta-Pinene	PIP	30	D	D		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether	PAG	40	D	E		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	PAF	34	D	E		A	Yes	1		
Polybutene	PLB	30	D	E		A	Yes	1		
Polypropylene glycol	PGC	40	D	E		A	Yes	1		
Isopropyl acetate	IAC	34	D	C		A	Yes	1		
n-Propyl acetate	PAT	34	D	C		A	Yes	1		
Isopropyl alcohol	IPA	20 <sup>2,3</sup>	D	C		A	Yes	1		
n-Propyl alcohol	PAL	20 <sup>2</sup>	D	C		A	Yes	1		
Propylbenzene (all isomers)	PBY	32	D	D		A	Yes	1		
Isopropylcyclohexane	IPX	31	D	D		A	Yes	1		
Propylene glycol	PPG	20 <sup>2</sup>	D	E		A	Yes	1		
Propylene glycol methyl ether acetate	PGN	34	D	D		A	Yes	1		
Propylene tetramer	PTT	30	D	D		A	Yes	1		
Sulfolane	SFL	39	D	E		A	Yes	1		
Tetraethylene glycol	TTG	40	D	E		A	Yes	1		
Tetrahydronaphthalene	THN	32	D	E		A	Yes	1		
Toluene	TOL	32	D	C		A	Yes	1		
Tricresyl phosphate (containing less than 1% ortho isomer)	TCP	34	D	E		A	Yes	1		
Triethylbenzene	TEB	32	D	E		A	Yes	1		
Triethylene glycol	TEG	40	D	E		A	Yes	1		
Triethyl phosphate	TPS	34	D	E		A	Yes	1		
Trimethylbenzene (all isomers)	TRE	32	D	{D}		A	Yes	1		
Trixylyl phosphate	TRP	34	D	E		A	Yes	1		

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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315

Shipyard: ARCOSA  
MADISONVILLE

Official #: 1292165

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Hull #: 2227-2

Cargo Identification							Conditions of Carriage			
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of Construction	Insp. Period
							App'd (Y or N)	VCS Category		
1-Undecene	UDC	30	D	D/E		A	Yes	1		
1-Undecyl alcohol	UND	20	D	E		A	Yes	1		
Xylenes (ortho-, meta-, para-)	XLX	32	D	D		A	Yes	1		



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 315  
Official #: 1292165

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Shipyard: ARCOSA MAD  
Hull #: 2227-2

### Explanation of terms & symbols used in the Table:

#### Cargo Identification

Name	The proper shipping name as listed in 46 CFR Table 30.25-1, 46 CFR Table 151.05, and 46 CFR Part 153 Table 2.
Chem Code none	The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual. Certain mixtures of cargoes may not have a CHRIS Code assigned.
Compatibility Group No.	The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.
Note 1	Because of the very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 372-1425.
Note 2	See Appendix I to 46 CFR Part 150 - exceptions to the compatibility chart.
Subchapter Subchapter D Subchapter O Note 3	The subchapter in Title 46 Code of Federal Regulations under which the cargo has been classified. Those flammable and combustible liquids listed in 46 CFR Table 30.25-1. Those hazardous cargoes listed in 46 CFR Table 151.05 and 46 CFR Part 153 Table 2. Those cargoes listed in 46 CFR Part 153 Table 2 are non-regulated cargoes when carried in bulk on non-oceangoing barges.
Grade	The cargo classification assigned to each flammable or combustible liquid. Grades inside of '{ }' indicate a provisional assignment based upon literature sources which were not verified by manufacturers data. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.
A, B, C	Flammable liquid cargoes, as defined in 46 CFR 30-10.22.
D, E	Combustible liquid cargoes, as defined in 46 CFR 30-10.15.
Note 4	The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.
NA	Those subchapter O cargoes which are not classified as a flammable or combustible liquid.
#	No flammability/combustibility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.
Hull Type	The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1.
I	Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1).
II	Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3).
III	Designed to carry products of sufficient hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).
NA	Not applicable to barges certificated under Subchapter D.

#### Conditions of Carriage

Tank Group	The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo.
Vapor Recovery Approved (Y or N)	Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo. No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.

#### Conditions of Carriage

Tank Group	The vessel's tank group (as defined under the "46 CFR Tank Group Characteristics" listed on page 1) which is authorized for carriage of the named cargo.
Vapor Recovery Approved (Y or N)	Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo. No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.
VCS Category:	The specified cargo's provisional classification for vapor control systems.
Category 1	(No additional VCS requirements above those for benzene, gasolines and crude oil) All requirements applying to the handling of oil and hazardous materials in Titles 33 and 46 Code of Federal Regulations (CFR) apply to these cargoes. Those specifically dealing with vapor control systems are in 33 CFR 155.750, 33 CFR 156.120, 33 CFR 156.170, 46 CFR 35.35 and 46 CFR 39. The cargo tank venting system calculations (46 CFR 39.20-11) and the pressure drop calculations (46 CFR 39.30-1(b)) must use appropriate friction factors, vapor densities and vapor growth rates.
Category 2	(Polymerizes) Polymerization and residue build-up of these cargoes can adversely affect the vessel by fouling safety components and restricting vapor flow which could lead to cargo tank overpressurization. The vessel's owner must develop a method of ensuring all VCS safety components are functional and polymer build-up is not causing an unsafe condition due to increased pressure in the vapor control piping and cargo tanks. The method shall be acceptable to the local Officer in Charge, Marine Inspection. This is in addition to the requirements of Category 1. Please note that a material not normally considered a monomer can be a problem in detonation arrester.
Category 3	(Highly toxic) VCSs for these toxic cargoes cannot use a spill valve or rupture disk as the primary means to meet the overfill protection requirement of 46 CFR 39.20-9. This requirement is in addition to the requirements of Category 1.
Category 4	(Polymerizes and highly toxic) Must comply with requirements of Categories 1, 2 and 3.
Category 5	(High vapor pressure) VCS pressure drop calculations for cargoes with a vapor pressure greater than 14.7 psia at 115 F must take into account increased vapor-air mixture densities and vapor growth rates as compared to Category 1 cargoes. Consult the Marine Safety Center's VCS Guidelines for further information. This requirement is in addition to the requirements of Category 1.
Category 6	(High vapor pressure and highly toxic) Must comply with requirements of Categories 1, 3 and 5.
Category 7	(High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5.
none	The cargo has not been evaluated/classified for use in vapor control systems.

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