



Department of Homeland Security  
United States Coast Guard

Serial #: C1-1802779

Dated: 16-Jul-18

# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: E2MS 103

Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN

Official #: 1287341

Hull #: 5369

### 46 CFR 151 Tank Group Characteristics

| Tank Group Information |                |  | Cargo Identification |        |       | Hull<br>Type | Cargo<br>Seg<br>Tank | Tanks               |      |        | Cargo<br>Transfer |      | Environmental<br>Control |                   | Fire<br>Protection<br>Provided | Special Requirements                                            |                                                                                | Elec<br>Haz | Temp<br>Cont |
|------------------------|----------------|--|----------------------|--------|-------|--------------|----------------------|---------------------|------|--------|-------------------|------|--------------------------|-------------------|--------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------|-------------|--------------|
| Tnk<br>Grp             | Tanks in Group |  | Density              | Press. | Temp. |              |                      | Type                | Vent | Gauge  | Pipe<br>Class     | Cont | Tanks                    | Handling<br>Space |                                | General                                                         | Materials of<br>Construction                                                   |             |              |
| A                      | #1C,#2C,#3C    |  | 13.6                 | Atmos. | Amb.  | I            | 1ii<br>2ii           | Integral<br>Gravity | PV   | Closed | I                 | G-1  | NR                       | NA                | Portable                       | 50-60, 50-70(a),<br>50-70(b), 50-73,<br>50-81(a), 50-<br>81(b), | 55-1(b), (c), (e), (f),<br>(h), (j), 56-1(a), (b),<br>(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 2 | O     | C   | II  | A | Yes | 4   |                               |  |  |  |  |  | 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, 50-86                  |  |  |  |  |  | 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 |
| Chemical Oil (refined, containing phenolics)                                     | COD | 21   | O     | E   | II  | A | No  | N/A | 50-73                         |  |  |  |  |  | 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                                                                    | CCH | 18   | O     | D   | III | A | Yes | 1   | 56-1(a), (b)                  |  |  |  |  |  | G |

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ASHLAND CITY, TN

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Hull #: 5369

| 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 |                                                                       |              |  |
| Cyclohexanone, Cyclohexanol mixture                               | CYX       | 18 <sup>2</sup>  | O           | E     | III       | A          | Yes                    | 1            | .56-1 (b)                                                             | G            |  |
| 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            |  |
| Dodecylidimethylamine, 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            |  |

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| 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 |                                                                       |              |
| 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            |
| Hydrocarbon 5-9                                                                                  | HFN       | 31               | O           | C     | III       | A                      | Yes            | 1            | .50-70(a), .50-81(a), (b)                                             | G            |
| 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(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(i)                                                      | 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 (crude)                                                                                  | STX       | 30               | O           | D     | III       | A                      | Yes            | 2            | No                                                                    | 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            |

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Department of Homeland Security  
United States Coast Guard

Serial #: C1-1802779

Dated: 16-Jul-18

# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 103**

Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN

Official #: 1287341

Page 4 of 9

Hull #: 5369

| 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 |
| 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).      | VBL       | 5               | O           | NA    | III       | A                      | No                            | N/A          | .50-73, .56-1(a), (c), (d)                                            | 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            |
| 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 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 |  |
| 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 |  |

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Department of Homeland Security  
United States Coast Guard

Serial #: C1-1802779  
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# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 103**

Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN

Official #: 1287341

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Hull #: 5369

| 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'l's of Construction | Insp. Period |
|                                        |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |                                                                        |              |
| 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            |                                                                        |              |
| 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            |                                                                        |              |

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United States Coast Guard

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Dated: 16-Jul-18

# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 103**

Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN

Official #: 1287341

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Hull #: 5369

| 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 |                                                                       |              |
| 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            |                                                                       |              |
| 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            |                                                                       |              |
| 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            |                                                                       |              |
| Methyl naphthalene (molten)                                             | MNA       | 32              | D           | E     |           | 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            |                                                                       |              |

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Vessel Name: **E2MS 103**

Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN

Official #: 1287341

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Hull #: 5369

| 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 |                                                                       |              |
| 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            |                                                                       |              |
| 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. 5                                         | OFV       | 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            |                                                                       |              |
| 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            |                                                                       |              |

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Shipyard: TRINITY MARINE,  
ASHLAND CITY, TN  
Hull #: 5369

Official #: 1287341

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| 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 |                                                                       |              |
| 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            |                                                                       |              |
| 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            |                                                                       |              |

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





Department of Homeland Security  
United States Coast Guard

Serial #: C1-1802779  
Dated: 16-Jul-18

# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **E2MS 103**

Official #: 1287341

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Shipyard: TRINITY MARI

Hull #: 5369

### 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<br>none      | The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual.<br>Certain mixtures of cargoes may not have a CHRIS Code assigned.                                                                                                                                                                                                                                                |
| Compatibilty 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    |                                                                                                                                                                                                                              |
| Approved (Y or N) | Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo.<br>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.<br>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, gasoline 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.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |