



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

Certification Date:	26 Aug 2024
Expiration Date:	26 Aug 2029

Certificate of Inspection

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

Vessel Name	Official Number	IMO Number	Call Sign	Service
KIRBY 28093	1344121			Tank Barge

Hailing Port	Hull Material	Horsepower	Propulsion
WILMINGTON, DE	Steel		
UNITED STATES			

Place Built	Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
GALVESTON, TX	26Aug2024	09Feb2024	R-1619	R-1619		R-297.5
UNITED STATES			-	-		-0

Owner	Operator
KIRBY INLAND MARINE LP 55 WAUGH DRIVE SUITE 1000 HOUSTON, TX 77007 UNITED STATES	KIRBY INLAND MARINE LP 18350 MARKET ST. CHANNELVIEW, TX 77530 UNITED STATES

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

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

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

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

THIS TANK BARGE IS PARTICIPATING IN THE EIGHTH-NINTH COAST GUARD DISTRICT'S TANK BARGE STREAMLINED INSPECTION PROGRAM (TBSIP). INSPECTION ACTIVITIES ABOARD THIS BARGE SHALL BE CONDUCTED IN ACCORDANCE WITH ITS TANK BARGE ACTION PLAN (TAP). INSPECTION ISSUES CONCERNING THIS BARGE SHOULD BE DIRECTED TO THE OCMI HOUSTON-GAVELSTON.

THIS VESSEL HAS BEEN GRANTED A FRESH WATER SERVICE EXAMINATION INTERVAL IN ACCORDANCE WITH 46 CFR TABLE 31.10-21(b); IF THIS VESSEL IS OPERATED IN SALT WATER MORE THAN SIX (6) MONTHS IN ANY TWELVE (12) MONTH PERIOD, THE VESSEL MUST BE INSPECTED USING SALT WATER INTERVALS PER 46 CFR TABLE 31.10-21(a) AND THE COGNIZANT OCMI NOTIFIED IN WRITING AS SOON AS THIS CHANGE IN STATUS OCCURS.

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

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

Annual/Periodic/Re-Inspection				This certificate issued by: K. P. WHALEN, CDR USCG, By Direction Officer in Charge, Marine Inspection Houma, Louisiana Inspection Zone
Date	Zone	A/P/R	Signature	



Certificate of Inspection

Vessel Name: KIRBY 28093

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	31Aug2034	26Aug2024	
Internal Structure	31Aug2029	26Aug2024	

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

Authorization: FLAMMABLE/COMBUSTIBLE LIQUIDS AND SPECIFIED HAZARDOUS CARGOES

Total Capacity	Units	Highest Grade Type	Part151 Regulated	Part153 Regulated	Part154 Regulated
29797	Barrels	A	Yes	No	No

Hazardous Bulk Solids Authority

Loading Constraints - Structural

Tank Number	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1	635	13.58
2	765	13.58
3	654	13.58

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	3911	10ft 6in	13.58	R, LB&S
III	4157	11ft 0in	13.58	R, LB&S

Conditions Of Carriage

ONLY THOSE HAZARDOUS CARGOES NAMED IN THE VESSEL'S CARGO AUTHORITY ATTACHMENT, SERIAL NO. C1-2400751 DATED 01 MAR 2024, MAY BE CARRIED AND THEN ONLY IN THE TANKS INDICATED, SUBJECT TO THE LOADING CONSTRAINTS OF THIS DOCUMENT.

PER 46 CFR 150.130, THE PERSON IN CHARGE OF THE BARGE IS RESPONSIBLE FOR ENSURING THAT THE COMPATIBILITY REQUIREMENTS OF 46 CFR 150 ARE MET. CARGOES MUST BE CHECKED FOR COMPATIBILITY USING THE FIGURES, TABLES, AND APPENDICES OF 46 CFR 150 IN CONJUNCTION WITH THE REACTIVE GROUP NUMBER FROM THE "COMPATIBILITY GROUP NO." COLUMN LISTED IN THE VESSEL'S CAA.

PER 46 CFR 151.10-15(c)(2) THE MAX TANK WEIGHTS LISTED BELOW REFLECT UNIFORM (WITHIN 5%) LOADING AT THE DEEPEST DRAFT ALLOWED. WHEN CARRYING SUBCHAPTER "O" CARGOES AT SHALLOWER DRAFTS, THE BARGE(S) SHOULD ALWAYS BE LOADED UNIFORMLY.

WHEN THE VESSEL IS CARRYING CARGOES CONTAINING GREATER THAN 0.5% BENZENE, THE PERSON IN CHARGE IS RESPONSIBLE FOR ENSURING THE PROVISIONS OF 46 U.S. CODE OF FEDERAL REGULATIONS PART 197, SUBPART C ARE APPLIED.

THE MAXIMUM DESIGN DENSITY OF CARGO WHICH MAY BE FILLED TO THE TANK TOP IS 8.74 LBS/GAL. CARGOES WITH HIGHER DENSITIES, UP TO 13.58 LBS/GAL, MAY BE CARRIED AS SLACK LOADS, BUT SHALL NOT EXCEED THE TANK WEIGHT LIMITS AS LISTED ABOVE.

IN ACCORDANCE WITH 46 CFR PART 39, EXCLUDING PART 39.4000, THIS VESSEL'S VAPOR CONTROL SYSTEM HAS BEEN INSPECTED TO THE PLANS APPROVED BY MARINE SAFETY CENTER LETTERS SERIAL NO. C1-2400751 DATED 01 MAR 2024, AND FOUND ACCEPTABLE FOR COLLECTION OF BULK LIQUID CARGO VAPORS ANNOTATED WITH "YES" IN THE CAA'S VCS COLUMN.



Certificate of Inspection

Vessel Name: KIRBY 28093

IN ACCORDANCE WITH 46 CFR PART 39.1017 AND 39.5000 THIS VESSEL'S VCS HAS BEEN EVALUATED AND APPROVED FOR MULTI-BREASTED TANDEM LOADING WITH OTHER VESSELS SPECIFICALLY APPROVED TO TANDEM LOAD WITH THIS VESSEL.

--- Inspection Status ---

Cargo Tanks

Tank Id	Internal Exam			External Exam		
	Previous	Last	Next	Previous	Last	Next
1	-	26Aug2024	31Aug2034	-	-	-
2	-	26Aug2024	31Aug2034	-	-	-
3	-	26Aug2024	31Aug2034	-	-	-

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

--- Fire Fighting Equipment ---

Fire Extinguishers - Hand portable and semi-portable

Quantity	Class Type
2	40-B

END



Certificate of Inspection

Cargo Authority Attachment

Official #: 1344121

Shipyard: West Gulf Marine

Hull #: 327

46 CFR 151 Tank Group Characteristics

Tank Group Information		Cargo Identification			Hull Type	Cargo Seg Tank	Tanks			Cargo Transfer		Environmental Control		Fire Protection Provided	Special Requirements		Elec Haz	Temp Cont
Tnk Grp	Tanks in Group	Density	Press.	Temp.			Type	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space		General	Materials of Construction		
A	#1-3 P/S	13.6	Atmos.	Amb.	II	1ii 2ii	Integral Gravity	PV	Closed	II	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73,	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g).	I-D	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

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

Authorized Subchapter O Cargoes

Bis(2-ethylhexyl) terephthalate	N/A	PEC	34	D/O	E	II	A	No	N/A	No	G
Olefins (C13+, all isomers)	85535-87-1	OFZ	30	D/O	E	III	A	Yes	1		G
Acetonitrile	75-05-8	ATN	37	O	C	III	A	Yes	3	No	G
Acrylonitrile	N/A	ACN	15 ²	O	C	II	A	Yes	4	.50-70(a), .55-1(e)	G
Adiponitrile	111-69-3	ADN	37	O	E	II	A	Yes	1	No	G
Alkyl (C7-C9) nitrates	20633-12-9*	AKN	34 ²	O	NA	III	A	Yes	1	.50-81, .50-86	G
Aminoethyl ethanolamine	111-41-1	AEE	8	O	E	III	A	Yes	1	.55-1(b)	G
Ammonium bisulfite solution (70% or less)	10192-30-0	ABX	43 ²	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G
Ammonium hydroxide (28% or less NH3)	1336-21-6	AMH	6	O	NA	III	A	No	N/A	.50-1(a), (b), (c), (f), (g)	G
Anthracene oil (Coal tar fraction)	65996-91-0	AHO	33	O	NA	II	A	No	N/A	No	G
Benzene	71-43-2	BNZ	32	O	C	III	A	Yes	1	.50-60	G
Benzene, C10-16 alkyl derivatives	N/A	BEND	32	O	D	III	A	No	N/A		G
Benzene and mixtures having 10% Benzene or more	N/A	BHB	32 ²	O	C	III	A	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	N/A	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)	N/A	BTX	32	O	B/C	III	A	Yes	1	.50-60	G
Butyl acrylate (all isomers)	141-32-2	BAR	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyl methacrylate	97-88-1	BMH	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Camphor oil (light)	8008-51-3	CPO	18	O	D	II	A	No	N/A	No	G
Carbon tetrachloride	56-23-5	CBT	36	O	NA	III	A	Yes	3	No	G
Caustic potash solution	1310-58-3	CPS	5 ²	O	NA	III	A	No	N/A	.50-73, .55-1(i)	G
Caustic soda solution	1310-73-2	CSS	5 ²	O	NA	III	A	No	N/A	.50-73, .55-1(j)	G

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Certificate of Inspection

Cargo Authority Attachment

Official #: 1344121

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Shipyard: West Gulf Marine

Hull #: 327

Cargo Identification							Conditions of Carriage				
Name	CAS Number	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		
Chlorobenzene	108-90-7	CRB	36	O	D	III	A	Yes	1	No	G
Chloroform	67-66-3	CRF	36	O	NA	III	A	Yes	3	No	G
Coal tar naphtha solvent	8030-30-6	NCT	33	O	D	III	A	Yes	1	.50-73	G
Creosote	N/A	CCW	21 ²	O	E	III	A	Yes	1	No	G
Cresols (all isomers)	1319-77-3	CRS	21	O	E	III	A	Yes	1	No	G
Cresylate spent caustic	N/A	GSC	5	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G
Cresylic acid tar	N/A	CRX	21	O	E	III	A	Yes	1	.55-1(f)	G
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	N/A	CHG	19 ²	O	C	III	A	Yes	1	No	G
Cyclohexanone	108-94-1	CCH	18	O	D	III	A	Yes	1	.56-1(a), (b)	G
Cyclohexanone, Cyclohexanol mixture	N/A	CYX	18 ²	O	E	III	A	Yes	1	.56-1 (b)	G
Cyclohexylamine	N/A	CHA	7	O	D	III	A	Yes	1	.56-1(a), (b), (c), (g)	G
Cyclopentadiene, Styrene, Benzene mixture	N/A	CSB	30	O	D	III	A	Yes	1	.50-60, .56-1(b)	G
iso-Decyl acrylate	N/A	IAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G
Dichlorobenzene (all isomers)	25321-22-6	DBX	36	O	E	III	A	Yes	3	.56-1(a), (b)	G
1,1-Dichloroethane	75-34-3	DCH	36	O	C	III	A	Yes	1	No	G
Dichloromethane	75-09-2	DCM	36	O	NA	III	A	Yes	5	No	G
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	5742-19-8	DDE	43	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	2008-39-1	DAD	0 ^{1,2}	O	A	III	A	No	N/A	.56-1(a), (b), (c), (g)	G
2,4-Dichlorophenoxyacetic acid, trisopropanolamine salt solution	34075-45-1	DTI	43 ²	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G
1,1-Dichloropropane	78-99-9	DPB	36	O	C	III	A	Yes	3	No	G
1,2-Dichloropropane	78-87-5	DPP	36	O	C	III	A	Yes	3	No	G
1,3-Dichloropropane	142-28-9	DPC	36	O	C	III	A	Yes	3	No	G
1,3-Dichloropropene	N/A	DPU	15	O	D	II	A	Yes	4	No	G
Dichloropropene, Dichloropropane mixtures	8003-19-8	DMX	15	O	C	II	A	Yes	1	No	G
Diethanolamine	111-42-2	DEA	8	O	E	III	A	Yes	1	.55-1(c)	G
Diethylenetriamine	111-40-0	DET	7 ²	O	E	III	A	Yes	1	.55-1(c)	G
Diisopropanolamine	110-97-4	DIP	8	O	E	III	A	Yes	1	.55-1(c)	G
N,N-Dimethylacetamide	127-19-5	DAC	10	O	E	III	A	Yes	3	.56-1(b)	G
Dimethylformamide	68-12-2	DMF	10	O	D	III	A	Yes	1	.55-1(a)	G
1-Dodecene	N/A	DDC	30	O	E	II	A	No	N/A	No	G

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Certificate of Inspection

Cargo Authority Attachment

Shipyard: West Gulf Marine

Hull #: 327

Official #: 1344121

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Cargo Identification							Conditions of Carriage				
Name	CAS Number	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		
Dodecyl dimethylamine, Tetradecyl dimethylamine mixture	112-18-5*	DOT	7	O	E	III	A	No	N/A	.56-1(b)	G
Dodecyl diphenyl ether disulfonate solution	N/A	DOS	43	O	#	II	A	No	N/A	No	G
Ethanolamine	141-43-5	MEA	8	O	E	III	A	Yes	1	.55-1(c)	G
Ethyl acrylate	140-88-5	EAC	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Ethylamine solutions (72% or less)	75-04-7	EAN	7	O	A	II	A	No	N/A	.55-1(b)	G
Ethylene cyanohydrin	109-78-4	ETC	20	O	E	III	A	Yes	1	No	G
Ethylenediamine	107-15-3	EDA	7 ²	O	D	III	A	Yes	1	.55-1(c)	G
Ethylene dichloride	107-06-2	EDC	36 ²	O	C	III	A	Yes	1	No	G
Ethylene glycol hexyl ether	112-25-4	EGH	40	O	E	III	A	No	N/A	No	G
Ethylene glycol propyl ether	2807-30-9	EGP	40	O	E	III	A	Yes	1	No	G
2-Ethylhexyl acrylate	103-11-7	EAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Ethyl methacrylate	97-63-2	ETM	14	O	D/E	III	A	Yes	2	.50-70(a)	G
Glutaraldehyde solutions (50% or less)	111-30-8	GTA	19	O	NA	III	A	No	N/A	No	G
Hexamethylenediamine solution	124-09-4	HMC	7	O	E	III	A	Yes	1	.55-1(c)	G
Isoprene	78-79-5	IPR	30	O	A	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G
Isoprene, Pentadiene mixture	N/A	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)	68131-33-9	KPL	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G
Mesityl oxide	141-79-7	MSO	18 ²	O	D	III	A	Yes	1	No	G
Methyl acrylate	96-33-3	MAM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
2-Methyl-5-ethyl pyridine	104-90-5	MEP	9	O	E	III	A	Yes	1	.55-1(e)	G
Methyl methacrylate	80-62-6	MMM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
2-Methylpyridine	109-06-8	MPR	9	O	D	III	A	Yes	3	.55-1(c)	G
alpha-Methylstyrene	98-83-9	MSR	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Corn oil	8001-30-7	OCO	34	O	E	II	A	No	N/A	.50-73	G
1,3-Pentadiene	1574-41-0	PDE	30	O	A	III	A	No	N/A	.50-70(a), .50-81	G
Perchloroethylene	127-18-4	PER	36	O	NA	III	A	No	N/A	No	G
Polyethylene polyamines	109-89-7	PEB	7 ²	O	E	III	A	Yes	1	.55-1(e)	G
Potassium chloride solution (brine)	N/A	PCSB	0	O	NA	III	A	No	N/A		G
iso-Propanolamine	78-96-6	MPA	8	O	E	III	A	Yes	1	.55-1(c)	G
Propanolamine (iso-, n-)	N/A	PAX	8	O	E	III	A	Yes	1	.50-1(b), (c)	G
Isopropylamine	75-31-0	IPP	7	O	A	II	A	Yes	5	.55-1(c)	G

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Cargo Identification							Conditions of Carriage				
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								App'd (Y or N)	VCS Category		
Pyridine	110-86-1	PRD	9	O	C	III	A	Yes	1	.55-1(e)	G
Solution containing ammonium thiosulfate (≤60%), ammonium sulfate (≤6%) and ammonium sulfite (≤5%)		ATAS	0	O	NA	III	A	No	N/A		G
Sodium aluminate solution (45% or less)	11138-49-1	SAU	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G
Sodium chlorate solution (50% or less)	7775-09	SDD	0 ^{1,2}	O	NA	III	A	No	N/A	.50-73	G
Sodium hypochlorite solution (20% or less)	7681-52-9	SHQ	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b)	G
Sodium Methylate (30% or less) in Methyl Alcohol Mixture	N/A	SMS	20	O	D	III	A	No	N/A	No	4 yr
Sodium sulfide, hydrosulfide solution (H ₂ S 15 ppm or less)	N/A	SSH	0 ^{1,2}	O	NA	III	A	Yes	1	.50-73, .55-1(b)	G
Sodium sulfide, hydrosulfide solution (H ₂ S greater than 15 ppm but less than 200 ppm)	N/A	SSI	0 ^{1,2}	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G
Sodium sulfide, hydrosulfide solution (H ₂ S greater than 200 ppm)	N/A	SSJ	0 ^{1,2}	O	NA	II	A	No	N/A	.50-73, .55-1(b)	O
Spent Caustic Soda Solution (containing up to 0.1% Benzene)	N/A	SCSS	5	O	NA	III	A	No	N/A	.50-60, .50-73, .55-1(j)	G
Styrene monomer	100-42-5	STY	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Tetrachloroethane	79-34-5	TEC	36	O	NA	III	A	No	N/A	No	G
1,2,4-Trichlorobenzene	120-82-1	TCB	36	O	E	III	A	Yes	1	No	G
1,1,2-Trichloroethane	79-00-5	TCM	36	O	NA	III	A	Yes	1	.50-73, .56-1(a)	G
Trichloroethylene	79-01-6	TCL	36 ²	O	NA	III	A	Yes	1	No	G
1,2,3-Trichloropropane	96-18-4	TCN	36	O	E	II	A	Yes	3	.50-73, .56-1(a)	G
Triphenylborane (10% or less), caustic soda solution	960-71-4	TPB	5	O	NA	III	A	No	N/A	.56-1(a), (b), (c)	G
Trisodium phosphate solution	10101-89-0	TSP	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c)	G
Urea, Ammonium nitrate solution (containing more than 2% NH ₃)	N/A	UAS	6	O	NA	III	A	No	N/A	.56-1(b)	G
Vanillin black liquor (free alkali content, 3% or more).	68514-06-7	VBL	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G
Vinyl acetate	108-05-4	VAM	13	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Vinyl neodecanoate	51000-52-3	VND	13	O	E	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G
Vinyltoluene	25013-15-4	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	67-64-1	ACT	18 ²	D	C		A	Yes	1	
Acetophenone	98-86-2	ACP	18	D	E		A	Yes	1	
Alcohol (C12-C16) poly(20+) ethoxylates	68551-12-2*	APW	20	D	E		A	Yes	1	

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Name	CAS Number	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		
Alcohol (C6-C17) (secondary) poly(3-6) ethoxylates	84133-50-6*	AEA	20	D	E		A	Yes	1		
Alcohol (C6-C17) (secondary) poly(7-12) ethoxylates	84133-50-6*	AEB	20	D	E		A	Yes	1		
Alcohols (C13+)	112-70-9*	ALY	20	D	E		A	Yes	1		
Amyl acetate (all isomers)	628-63-7	AEC	34	D	D		A	Yes	1		
Amyl alcohol (iso-, n-, sec-, primary)	N/A	AAI	20	D	D		A	Yes	1		
Benzyl acetate	140-11-4	BZE	34	D	E		A	Yes	1		
Benzyl alcohol	100-51-6	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)	N/A	BFY	20	D	E		A	Yes	1		
Butyl acetate (all isomers)	123-86-4	BAX	34	D	D		A	Yes	1		
Isobutyl alcohol	78-83-1	IAL	20 ²	D	D		A	Yes	1		
Butyl alcohol (n-)	N/A	BAN	20 ²	D	D		A	Yes	1		
Butyl alcohol (sec-)	N/A	BAS	20 ²	D	C		A	Yes	1		
tert-Butyl Alcohol	N/A	BAT	20 ²	D	C		A	Yes	1		
Butyl benzyl phthalate	85-68-7	BPH	34	D	E		A	Yes	1		
Butyl toluene	1595-05-7	BUE	32	D	D		A	Yes	1		
Caprolactam solutions	105-60-2	CLS	22	D	E		A	Yes	1		
Cycloheptane	291-64-5	CYE	31	D	C		A	Yes	1		
Cyclohexane	110-82-7	CHX	31	D	C		A	Yes	1		
Cyclohexanol	108-93-0	CHN	20	D	E		A	Yes	1		
Cyclohexyl acetate	622-45-7	CYC	34	D	D		A	Yes	1		
1,3-Cyclopentadiene dimer (molten)	7313-32-8	CPD	30	D	D/E		A	Yes	2		
Cyclopentane	287-92-3	CYP	31	D	B		A	Yes	1		
p-Cymene	99-87-6	CMP	32	D	D		A	Yes	1		
iso-Decaldehyde	N/A	IDA	19	D	E		A	Yes	1		
n-Decaldehyde	N/A	DAL	19	D	E		A	Yes	1		
Decanoic acid	334-48-5	DCO	4	D	#		A	Yes	1		
Decene	872-05-9	DCE	30	D	D		A	Yes	1		
Decyl alcohol (all isomers)	85566-12-7	DAX	20 ²	D	E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	104-72-3	DBZ	32	D	E		A	Yes	1		
Diacetone alcohol	123-42-2	DAA	20 ²	D	D		A	Yes	1		
Dibutyl phthalate	84-74-2	DPA	34	D	E		A	Yes	1		

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Hull #: 327

Cargo Identification							Conditions of Carriage				
Name	CAS Number	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		
Diethylbenzene	25340-17-4	DEB	32	D	D		A	Yes	1		
Diethylene glycol	111-46-6	DEG	40 ²	D	E		A	Yes	1		
Diisobutylene	25167-70-8	DBL	30	D	C		A	Yes	1		
Diisobutyl ketone	108-83-8	DIK	18	D	D		A	Yes	1		
Diisopropylbenzene (all isomers)	25321-09-9	DIX	32	D	E		A	Yes	1		
Dimethyl phthalate	131-11-3	DTL	34	D	E		A	Yes	1		
Diocetyl phthalate	117-84-0	DOP	34	D	E		A	Yes	1		
Dipentene	138-86-3	DPN	30	D	D		A	Yes	1		
Diphenyl	92-52-4	DIL	32	D	D/E		A	Yes	1		
Diphenyl, Diphenyl ether mixtures	8004-13-5	DDO	33	D	E		A	Yes	1		
Diphenyl ether	101-84-8	DPE	41	D	(E)		A	Yes	1		
Dipropylene glycol	25265-71-8	DPG	40	D	E		A	Yes	1		
Distillates: Flashed feed stocks	8002-05-9	DFF	33	D	E		A	Yes	1		
Distillates: Straight run	68814-87-9	DSR	33	D	E		A	Yes	1		
Dodecene (all isomers)	25378-22-7	DOZ	30	D	D		A	Yes	1		
Dodecylbenzene	123-01-3	DDB	32	D	E		A	Yes	1		
2-Ethoxyethyl acetate	111-15-9	EEA	34	D	D		A	Yes	1		
Ethoxy triglycol (crude)	112-50-5	ETG	40	D	E		A	Yes	1		
Ethyl acetate	141-78-6	ETA	34	D	C		A	Yes	1		
Ethyl acetoacetate	141-97-9	EAA	34	D	E		A	Yes	1		
Ethyl alcohol	64-17-5	EAL	20 ²	D	C		A	Yes	1		
Ethylbenzene	100-41-4	ETB	32	D	C		A	Yes	1		
Ethyl butanol	97-95-0	EBT	20	D	D		A	Yes	1		
Ethyl tert-butyl ether	637-92-3	EBE	41	D	C		A	Yes	1		
Ethyl butyrate	105-54-4	EBR	34	D	D		A	Yes	1		
Ethyl cyclohexane	1678-91-7	ECY	31	D	D		A	Yes	1		
Ethylene glycol	107-21-1	EGL	20 ²	D	E		A	Yes	1		
Ethylene glycol butyl ether acetate	112-07-2	EMA	34	D	E		A	Yes	1		
Ethylene glycol diacetate	111-55-7	EGY	34	D	E		A	Yes	1		
Ethylene glycol phenyl ether	122-99-6	EPE	40	D	E		A	Yes	1		
Ethyl-3-ethoxypropionate	763-69-9	EEP	34	D	D		A	Yes	1		
2-Ethylhexanol	104-76-7	EHX	20	D	E		A	Yes	1		
Ethyl propionate	105-37-3	EPR	34	D	C		A	Yes	1		

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Cargo Identification							Conditions of Carriage				
Name	CAS Number	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat's of Construction	Insp. Period
								App'd (Y or N)	VCS Category		
Ethyl toluene	25550-14-5	ETE	32	D	D		A	Yes	1		
Formamide	75-12-7	FAM	10	D	E		A	Yes	1		
Furfuryl alcohol	98-00-0	FAL	20 ²	D	E		A	Yes	1		
Gasoline blending stocks: Alkylates	64741-64-6	GAK	33	D	C		A	Yes	1		
Gasoline blending stocks: Reformates	8006-61-9	GRF	33	D	C		A	Yes	1		
Gasolines: Automotive (containing not over 4.23 grams lead per gallon)	86290-81-5	GAT	33	D	A/C		A	Yes	1		
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	N/A	GAV	33	D	C		A	Yes	1		
Gasolines: Casinghead (natural)	68425-31-0	GCS	33	D	A/C		A	Yes	1		
Gasolines: Polymer	8006-61-9	GPL	33	D	C		A	Yes	1		
Gasolines: Straight run	68606-11-1	GSR	33	D	A/C		A	Yes	1		
Glycerine	56-81-5	GCR	20 ²	D	E		A	Yes	1		
Heptane (all isomers)	142-82-5	HMX	31	D	C		A	Yes	1		
n-Heptanoic acid	111-14-8	HEN	4	D	E		A	Yes	1		
Heptanol (all isomers)	111-70-6	HTX	20	D	D/E		A	Yes	1		
Heptene (all isomers)	592-76-7	HPX	30	D	C		A	Yes	2		
Heptyl acetate	112-06-1	HPE	34	D	E		A	Yes	1		
Hexane (all isomers)	110-54-3	HXS	31 ²	D	B/C		A	Yes	1		
Hexanoic acid	142-62-1	HXO	4	D	E		A	Yes	1		
Hexanol	N/A	HXN	20	D	D		A	Yes	1		
Hexene (all isomers)	592-41-6	HEX	30	D	C		A	Yes	2		
Hexylene glycol	107-41-5	HXG	20	D	E		A	Yes	1		
Isophorone	78-59-1	IPH	18 ²	D	E		A	Yes	1		
Jet fuel: JP-4	50815-00-4	JPF	33	D	E		A	Yes	1		
Jet fuel: JP-5 (kerosene, heavy)	8008-20-6	JPV	33	D	D		A	Yes	1		
Kerosene	8008-20-6	KRS	33	D	D		A	Yes	1		
Lauric acid	143-07-7	LRA	34	D	#		A	Yes	1		
Methyl acetate	79-20-9	MTT	34	D	D		A	Yes	1		
Methyl alcohol	67-56-1	MAL	20 ²	D	C		A	Yes	1		
Methylamyl acetate	7789-99-3	MAC	34	D	D		A	Yes	1		
Methylamyl alcohol	108-11-2	MAA	20	D	D		A	Yes	1		
Methyl amyl ketone	110-43-0	MAK	18	D	D		A	Yes	1		
Methyl tert-butyl ether	1634-04-4	MBE	41 ²	D	C		A	Yes	1		

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Cargo Identification							Conditions of Carriage				
Name	CAS Number	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
Methyl butyl ketone	N/A	MBK	18	D	C		A	Yes	1		
Methyl butyrate	623-42-7	MBU	34	D	C		A	Yes	1		
Methylcyclohexane	591-47-9	MCY	31	D	C		A	Yes	1		
Methyl ethyl ketone	78-93-3	MEK	18 ²	D	C		A	Yes	1		
Methyl heptyl ketone	821-55-6	MHK	18	D	D		A	Yes	1		
2-Methyl-2-hydroxy-3-butyne	115-19-5	MHB	20	D	C		A	Yes	1		
Methyl isobutyl ketone	108-10-1	MIK	18 ²	D	C		A	Yes	1		
Mineral spirits	64475-85-0	MNS	33	D	D		A	Yes	1		
Myrcene	123-35-3	MRE	30	D	D		A	Yes	1		
Naphtha: Heavy	64742-94-5	NAG	33	D	#		A	Yes	1		
Naphtha: Petroleum	64742-94-5	PTN	33	D	#		A	Yes	1		
Naphtha: Solvent	64742-94-5	NSV	33	D	D		A	Yes	1		
Naphtha: Stoddard solvent	8052-41-3	NSS	33	D	D		A	Yes	1		
Naphtha: Varnish makers and painters (75%)	8032-32-4	NVM	33	D	C		A	Yes	1		
Neodecanoic acid	26896-20-8	NEA	4	D	E		A	Yes	1		
Nonane (all isomers)	111-84-2	NAX	31	D	D		A	Yes	1		
Nonene (all isomers)	N/A	NON	30	D	D		A	Yes	2		
Nonyl alcohol (all isomers)	143-08-8	NNS	20 ²	D	E		A	Yes	1		
Nonyl phenol	25154-52-3	NNP	21	D	E		A	Yes	1		
Nonyl phenol poly(4+)orthoxylates	9016-45-9	NPE	40	D	E		A	Yes	1		
Octane (all isomers)	111-65-9	OAX	31	D	C		A	Yes	1		
Octanoic acid (all isomers)	124-07-2	OAY	4	D	E		A	Yes	1		
Octanol (all isomers)	111-87-5	OCX	20 ²	D	E		A	Yes	1		
Octene (all isomers)	111-66-0	OTX	30	D	C		A	Yes	2		
Oil, fuel: No. 2	68476-30-2	OTW	33	D	D/E		A	Yes	1		
Oil, fuel: No. 2-D	N/A	OTD	33	D	D		A	Yes	1		
Oil, fuel: No. 4	68553-00-4	OFR	33	D	D/E		A	Yes	1		
Oil, fuel: No. 5	70892-11-4	OFV	33	D	D/E		A	Yes	1		
Oil, fuel: No. 6	68553-00-4	OSX	33	D	E		A	Yes	1		
Oil, misc: Crude	N/A	OIL	33	D	A/D		A	Yes	1		
Oil, misc: Diesel	68334-30-5	ODS	33	D	D/E		A	Yes	1		
Oil, misc: Gas, high pour	8006-61-9	OGP	33	D	E		A	Yes	1		
Oil, misc: Lubricating	93572-43-1	OLB	33	D	E		A	Yes	1		

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Cargo Identification							Conditions of Carriage				
Name	CAS Number	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		
Oil, misc: Residual	68476-33-5	ORL	33	D	E		A	Yes	1		
Oil, misc: Turbine	N/A	OTB	33	D	E		A	Yes	1		
alpha-Olefins (C6-C16) mixtures	592-41-6	OAM	30	D	E		A	Yes	1		
Pentane (all isomers)	109-66-0	PTY	31	D	A		A	Yes	5		
Pentene (all isomers)	109-67-1	PTX	30	D	A		A	Yes	5		
n-Pentyl propionate	624-54-4	PPE	34	D	D		A	Yes	1		
alpha-Pinene	7785-26-4	PIO	30	D	D		A	Yes	1		
beta-Pinene	127-91	PIP	30	D	D		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether	N/A	PAG	40	D	E		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl (C1-C6) ether acetate	N/A	PAF	34	D	E		A	Yes	1		
Polybutene	9003-29-6	PLB	30	D	E		A	Yes	1		
Polypropylene glycol	25322-69-4	PGC	40	D	E		A	Yes	1		
Propionaldehyde	123-38-6	PAD	19	D	C		A	Yes	2		
Isopropyl acetate	108-21-4	IAC	34	D	C		A	Yes	1		
n-Propyl acetate	109-60-4	PAT	34	D	C		A	Yes	1		
Isopropyl alcohol	67-63-0	IPA	20 ^{2,3}	D	C		A	Yes	1		
n-Propyl alcohol	71-23-8	PAL	20 ²	D	C		A	Yes	1		
Propylbenzene (all isomers)	103-65-1	PBY	32	D	D		A	Yes	1		
Isopropylcyclohexane	696-29-7	IPX	31	D	D		A	Yes	1		
Propylene glycol	57-55-6	PPG	20 ²	D	E		A	Yes	1		
Propylene glycol methyl ether acetate	108-65-6	PGN	34	D	D		A	Yes	1		
Propylene tetramer	6842-15-5	PTT	30	D	D		A	Yes	1		
Sulfolane	126-33-0	SFL	39	D	E		A	Yes	1		
Tetraethylene glycol	112-60-7	TTG	40	D	E		A	Yes	1		
Tetrahydronaphthalene	119-64-2	THN	32	D	E		A	Yes	1		
Tetramethylbenzene (all isomers)	527-53-7	TTC	32	D	#		A	Yes	1		
Toluene	108-88-3	TOL	32	D	C		A	Yes	1		
Tricresyl phosphate (containing less than 1% ortho isomer)	1330-78-5	TCP	34	D	E		A	Yes	1		
Triethylbenzene	102-25-0 (1,3,5)	TEB	32	D	E		A	Yes	1		
Triethylene glycol	112-27-6	TEG	40	D	E		A	Yes	1		
Triethyl phosphate	78-40-0	TPS	34	D	E		A	Yes	1		
Trimethylbenzene (all isomers)	95-63-6 (1,2,4)	TRE	32	D	{D}		A	Yes	1		

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Cargo Identification							Conditions of Carriage				
Name	CAS Number	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		
2,2,4-Trimethyl-1,3-pentanediol-1-isobutyrate	18491-15-1	TMP	34	D	E		A	Yes	1		
Trixylyl phosphate	N/A	TRP	34	D	E		A	Yes	1		
1-Undecene	821-95-4	UDC	30	D	D/E		A	Yes	1		
Undecyl alcohol	112-42-5	UND	20	D	E		A	Yes	1		
Xylenes	106-42-3	XLX	32	D	D		A	Yes	1		



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Explanation of terms & symbols used in the Table:

Cargo Identification

Name	The proper shipping name as listed in 46 CFR Table 30.25-1, 46 CFR Table 151.05, and 46 CFR Part 153 Table 2.
Chem Code none	The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual. Certain mixtures of cargoes may not have a CHRIS Code assigned.
Compatibility Group No.	The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.
Note 1	Because of the very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-ENG-5), 2703 Martin Luther King Jr. Ave SE Stop 7509, Washington DC 20593-7509. Email: hazmatstandards@uscg.mil.
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. No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.

Conditions of Carriage

Tank Group	The vessel's tank group (as defined under the "46 CFR Tank Group Characteristics" listed on page 1) which is authorized for carriage of the named cargo.
Vapor Recovery Approved (Y or N)	Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo. No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.
VCS Category:	The specified cargo's provisional classification for vapor control systems.
Category 1	(No additional VCS requirements above those for benzene, gasolines and crude oil) All requirements applying to the handling of oil and hazardous materials in Titles 33 and 46 Code of Federal Regulations (CFR) apply to these cargoes. Those specifically dealing with vapor control systems are in 33 CFR 155.750, 33 CFR 156.120, 33 CFR 156.170, 46 CFR 35.35 and 46 CFR 39. The cargo tank venting system calculations (46 CFR 39.2011) and the pressure drop calculations (46 CFR 39.3001) 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 39.2009. 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.