



SHELL CARGO HANDLING SHEET

Methyl Ethyl Ketone (MEK)

Cargo Handling Sheets are for the use of vessels chartered on behalf of Shell.

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Revision no. 12

Product Details

Trade Names:	Methyl Ethyl Ketone; Methyl Ethyl Ketone Sustainable; BC Methyl Ethyl Ketone
IMO Product Name:	Methyl Ethyl Ketone
Chemical Family:	Ketone

[Link to Safety Data Sheet](#)

Physical Properties

Density:	804 - 806 kg/m ³ (20°C / 68°F)
Dynamic Viscosity:	0.42 mPa.s (20°C / 68°F)
Vapor Pressure:	12.600 Pa (20°C / 68°F)
Boiling Point:	79.5°C / 175.1°F
Pour Point:	-86°C / -123°F
Flash Point:	-9°C / 16°F
Appearance:	Clear liquid with a characteristic odour

Note 1: Physical Properties are for reference only and valid as of date of this revision; see loading terminal for specific properties.

Note 2: Hazard Identification: Extremely Flammable, if sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air/vapour mixtures can occur, categorized as Toxic (IBC 2020); See SDS for full list of hazards and precautions.

MARPOL Details

MARPOL Annex:	II
IMO Ship Type:	3, must be double hull
Inland Barge:	Double Hull
IMO Pollution Category:	Z
IBC 16.2.6:	No
IBC 16.2.9:	No
Pre-Wash Required:	No.
Compatibility Group:	USCG compatibility group 18

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading:	No
N2 Blanket Required:	Yes, PQ requirement; Max 5% O ₂ ; see notes below and Regional Requirements
Adjacent Space Purge:	No
Loading Temperature Range:	Ambient
Transit Temperature Range:	Ambient - 40°C / 104°F
Unloading Temperature Range:	Ambient - 40°C / 104°F
Maximum Heating Coil Temperature:	Blanked Off
Maximum Adjacent Temperature:	40°C / 104°F

Note 1: If Nitrogen blanket is in place and Carrier chooses to transship, carrier must reapply nitrogen blanket on the cargo, both on the discharging and receiving vessel, at their time, risk, and expense.

Note 2: PQ = Product Quality

Note 3: N₂ Blanket:

a. O₂ level in tanks: Max1000 ppm (0.1%) O₂.

b. Vessel to maintain a constant nitrogen overpressure of 20 millibars or more during the voyage.

Daily Log: During the voyage the vessel shall maintain a daily log of the following and the log shall be sent to the Shell Charterer/Planner at the time of unloading. Tank pressure, O₂ level and Tank Temperature.

Regional Requirements

Note 1: US Barge: Coatings – Stainless Steel, Mild Steel, Zinc (No Epoxy); N₂ pad - 5% O₂ after loading, N₂ bottles onboard not required. Vapor Return – Generally yes, but dependent on terminal Air Quality Permit.

Transshipments

Prior to arranging transshipment Charterer must agree to Owner's proposed plan. When arranged by the Owner, Owner must ensure that all transshipment vessels comply with the requirements of this cargo handling sheet.

Tank Acceptance Requirement

Banned Prior Cargo:	No
Stainless Steel or Coated Tanks:	Stainless steel, zinc, Interline 9001, Jotun Flexline, or Marineline 784 (high density polymer coating)

Note 1: Vessels offered for loading into coated tanks:

- Carrier to verify suitability of coating.
- For newly coated tanks, either partially or fully recoated, the tanks must have carried 3 or more cargoes for a total of >90days at >90% full.
- Tank Coating Condition Questionnaire submitted to Charterers for review prior to fixing a coated vessel.
- Coated tanks to be in very good condition with minimal blistering or breakdown, < 0.5% total tank area.
- All blisters to be scraped to hard coating.
- All defects to be noted in Survey Report
- Pipelines and fittings to be stainless steel

All nominated shipboard cargo handling systems are to be presented clean (residual free), dry, odour free, rust free, with good gaskets, fit to load this cargo.

Maintenance of heating coils is to be verified in the ship's log. If product is to be heated, heating coils are to be confirmed leak free. If product is not heated, heating coils are to be blown clear and dried with N₂, and blanked off.

Wall Wash Test Requirement

Wall Wash Required:	Yes; all conducted with Methanol except PH test, which uses DI water.
Coated Tanks:	WWT conducted by cargo surveyor
Stainless Steel Tanks	Verification of shipboard WWT may be accepted if below specs are met. (Send WWT Verification to the responsible Shell charterer and present to cargo surveyor and loading master at loading terminal.) WWT Verification form is available in the supporting documents section on the CHS Website

Wall Wash Test	Specification	Standard
Appearance	Clear and free from suspended matter	ASTM D4176
Colour Test	Max 10 Pt/Co	ASTM D1209
Hydrocarbons	Pass	ASTM D1722

Additional WWT for Coated Tanks if Prior Cargo is:

Prior Cargo	Test	Required result	Method
Acrylate	PPT	>30 minutes	ASTM D1363
Oils, Waxes, Veg Oils, Fame	NVM	100 ppm	ASTM D1353
Acids, Alkalis	PH Test	6.9 - 7.1	ASTM E70

Safety Information and Incident Reporting

Safety Information: Refer the SDS (Safety Data Sheet) or e-SDS.

Incident Reporting: All incidents should be reported in accordance with regulations and charter party requirements. For additional marine cargo handling advice or information, contact the regional Chemical Marine Technical Advisor.



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