SHELL
CARGO HANDLING SHEET

Phenol

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

Document date 18 Dec 2024
Revision no.12

Product Details

Trade Name:	Phenol
IMO Product Name:	Phenol
Chemical Family:	Phenols

Link to Safety Data Sheet

Physical Properties

Density:	1,071 kg/m3 (20 °C / 68 °F)
Dynamic Viscosity:	Solid (20 °C / 68 °F) < 50 mPa.s (41 °C / 106 °F) 3.4 mPa.s (50 °C / 122 °F) 4.2 mPa.s (40 °C / 104 °F)
Vapor Pressure:	0.35 kPa (50 °C / 122 °F)
Boiling Point:	181 °C / 358 °F
Melting Point:	40.7 °C / 105.3°F
Flash Point:	79.4 C / 174.9°F
Appearance:	White crystals below 43 °C / 109 °F. Clear liquid on melting; Phenolic, sweet odor.

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: See SDS for full list of hazards and precautions.

Marpol Details

Marpol Annex:	II
IMO Ship Type:	2
Inland Barge:	Double Hull
IMO Pollution Category:	Y
IBC 16.2.6:	No
IBC 16.2.7:	No
IBC 16.2.9:	Yes

Pre-Wash Required:	No pre-wash required when unloaded in accordance with CHS
Compatibility Group:	USCG compatibility group 21

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading:	Not a Product Quality requirement
N2 Blanket Required:	Yes, Product Quality requirement; Max 5% 02; see noted below Regional Requirements
Adjacent Space Purge:	No
Loading Temperature Range:	50 - 60 °C / 122 - 140 °F
Transit Temperature Range:	50 - 55 °C / 122 - 131 °F
Unloading Temperature Range:	51 - 55 °C / 124 - 131 °F
Maximum Heating Coil Temperature:	65 °C / 150 °F
Maximum Adjacent Temperature:	65 °C / 150 °F

Note 1: Prior to vessel acceptance Owner's must submit a "Phenol Safety Checklist" to the responsible Shell Charterer.
Note 2: 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 3: If vessel is required to inert tanks, then only N2 will be accepted as an inerting medium.
Note 4: N2 Blanket:
a. O2 level in tanks: Max 5% 02 content
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/Operator at the time of unloading. Tank pressure, O2 level and Tank Temperature.
Note 5: Vessels using deck mounted heat exchangers which require the product to be pumped through the heater, or tanks serviced by cargo pump room are not accepted for the carriage of Phenol.
Note 6: Heating coil temperatures above 65 °C / 150 °F can cause product discoloration. Rapid heating or overheating of Phenol may cause a color off spec contamination.

Regional Requirements

Note 1: Ship to Ship/Barge transshipment in Europe: Nitrogen blanket does not have to be replaced due to local requirements.

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:	See Note 1 below
Stainless Steel or Coated Tanks:	Stainless steel only.

Note 1: For Sulphuric acid as one of the last three prior cargoes:
• All tank surfaces should be inspected for discoloration from water/acid reaction with stainless steel. This discoloration can be absorbed by the phenol which can cause a color contamination problem.
• In case discoloration is noted, the Chemical MTA and QA manager should be advised before loading the tank.
Note 2: Shipboard common lines should not be used if they last contained Sulphuric or Nitric Acid.

All nominated shipboard cargo handling systems are to be presented clean (residual free), dry, odor 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, 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.
Stainless Steel and coated 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.) Link to: WWT Verification Form

Wall Wash Test	Specification	Standard
Appearance	Clear and free from suspended matter	ASTM D4176
Chlorides	Max 20 ppm	IMPCA 002-98
Hydrocarbons	Pass	ASTM D1722
Color Test	Max 5 Pt/Co	ASTM D1209

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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