

Cargo Handling Sheet

Non-Shell Product

Benzene

Document Date: 30 July 2021

Revision 4

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

Information is obtained from supplier's SDS and other reference publications.

Product Details

Product Name:	Benzene
IMO Product Name:	Benzene and mixtures having 10% benzene or more
Chemical Family:	Aromatic Hydrocarbon
Product Code:	Non-Shell product
SDS:	Get from loading terminal or charterer

Physical Properties

Density:	883 kg/m ³ (15 °C / 59 °F)
Dynamic Viscosity:	0.60 mPas (20 °C / 68 °F)
Vapor Pressure:	10 kPa (20 °C / 68 °F)
Boiling Point:	80.1 °C / 176.2 °F
Melting Point:	5.5 °C / 41.9 °F
Flash Point:	-11 °C / 12 °F
Auto-ignition temperature:	498 °C / 928 °F
Appearance:	Colourless liquid with aromatic 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: highly flammable, static accumulator, toxic, carcinogen, may solidify; See SDS for full list of hazards and precautions.

Transhipments

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

Marpol Details

Marpol Annex:	II
IMO Ship Type:	3, must be double hull

Inland Barges:	Double Hull
IMO Pollution Category:	Y
IBC 16.2.6:	No
IBC 16.2.9:	Yes
Pre-Wash Required:	No pre-wash required when discharged in accordance with CHS
Compatibility Group:	USCG compatibility group 32

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior to Loading:	No
N2 Blanket Required:	Not a Product Quality requirement; see notes below
Adjacent Space Purge:	No
Loading Temperature Range:	Ambient (see notes below and Regional Requirement)
Transit Temperature Range:	Ambient to 40 °C / 104 °F (see note 1 below)
Discharge Temperature Range:	Ambient to 40 °C / 104 °F (see note 1 below)
Maximum Heating Coil Temperature:	60 °C / 140 °F (see note 1 below)
Adjacent Maximum Cargo Temperature:	40 °C / 104 °F

Note 1: Minimum handling temperature for Benzene is 11 °C / 52 °F

Note 2: If loaded below 16°C / 61°F or if during voyage cargo temperature drops to < 16°C / 61°F, Shell Charterer should be notified.

Note 3: If vessel is required to inert tanks then only N2 will be accepted as an inerting medium.

Note 4: If Nitrogen blanket is in place and Carrier chooses to tranship, carrier must reapply nitrogen blanket on the cargo, both on the discharging and receiving ship, at their time, risk, and expense.

Regional Requirements

Note 1: In Europe minimum load temperature is set to 20 °C / 68 °F

Note 2: US Barge: Coatings – Stainless Steel, Mild Steel, Zinc, Epoxy; N2 not required; Vapor Return – yes; Heating – possible

Tank Acceptance Requirements

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 and dried with N2 and blanked off.

Stainless Steel or Coated Tank: Either; carrier to verify suitability of coating for product
Banned Prior Cargo: No
Wall Wash Required: No

Safety Information and Incident Reporting

Safety Information:

HSSE information can be found in the SDS or e-SDS.

Incident Reporting:

All incidents should be reported in accordance with regulations and charter party requirements.

International Registered Vessels: If an incident occurs call Shell International Trading and Shipping in London on +442079347777.

Jones Act Vessels: call the Shell 24 hr. incident number at +17132412532. The USA National Response Center telephone number is +18004248802.

For additional marine cargo handling advice or information, contact the responsible regional Shell Marine Technical Advisor.

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