



Shell Chemicals

Cargo Handling Sheet

Linevol 9

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Revision 7

Cargo Handling Sheets are for the use of vessels chartered by Shell Chemicals

Product Details

Product Name: Linevol 9
Shipping Name: Nonyl Alcohol (all isomers)
Chemical Family: Alcohols
Product Code: V9341

SDS: <http://www.shell.com/business-customers/chemicals/safe-product-handling-and-transportation/safety-data-sheets.html>

Physical Properties

Density: 828 kg/m³ @ 20 °C
Kinematic Viscosity: 12.97 mm²/s (20 °C / 68 °F)
Vapor Pressure: 1.7 Pa (20 °C / 68 °F)
Boiling Point: 210 - 213 °C / 410 - 415 °F
Melting Point: -11 °C / 12 °F
Flash Point: 98 °C / 208 °F
Appearance: Colourless liquid @ 20 °C / 68 °F; mild odour

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

Transhipment

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: 2
Inland Barges: Double Hull
IMO Pollution Category: Y
IBC 16.2.6: No

IBC 16.2.9:	No
Pre-Wash Required:	No
Compatibility Group:	USCG compatibility group 20, not compatible with Isocyanates 12

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading:	Yes, PQ requirement; Max 1000 ppm (0.1%) O ₂ ; 99.90 % pure N ₂ required; see Notes below
N2 Blanket Required:	Yes, PQ requirement; Max 1000 ppm (0.1%) O ₂ ; 99.90 % pure N ₂ required; see Notes below
Adjacent Space Purge:	No
Loading Temperature Range:	Ambient
Transit Temperature Range:	Ambient
Discharge Temperature Range:	Ambient; see notes below
Maximum Heating Coil Temperature:	Blanked off; see notes below
Adjacent Maximum Cargo Temperature:	50 °C / 122 °C

Note 1: 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 vessel, at their time, risk, and expense.

Note 2: PQ = Product Quality

Note 3: N₂ Blanket Guidance:

- a. O₂ level in tanks: Max 1000 ppm O₂
- b. Vessel to maintain a constant nitrogen overpressure of 20 millibars or more during the voyage
- c. Vessel to keep a daily N₂ log of each tank:
 1. Tank pressure
 2. O₂ level
 3. Tank Temperature

Log is to be presented to receiver at time of discharge and a copy sent to Charterers.

Regional Requirements

Note 1: Short voyages in Europe: may only require blanketing, however if the short voyage is part of an international voyage, the short voyage must also have the tanks purged.

Note 2: Short Voyages in Japan (3 days or less): Pre-load purging or padding is not required.

Note 3: Discharge temperature is ambient; however, heating to 16 – 21 °C is acceptable to improve pumpability in cold climates, as long as these temperatures are maintained during the voyage.

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 Tanks: Stainless Steel only
Banned Prior Cargo: Styrene or any other product which can polymerize.
Phosphoric and Sulphuric acid, and Caustic

Wall Wash Required: Yes

Stainless Steel Tanks: verification of shipboard WWT may be accepted if below specs are met. (Send WWT Verification to the responsible Shell Chemicals charterer and present to cargo surveyor and loading master at loading terminal.)

Wall Wash Test:	Specification	Standard
Hydrocarbons	= Pass	ASTM D1722
Chlorides	≤ 3.0 ppm	IMPCA 002-98
Colour Test	≤ 5 Pt/Co Max	ASTM D1209

Link to: [WWT Verification Form](#)

Safety Information and Incident Reporting

Safety Information:

For more detailed information, refer to the SDS or e-SDS for reportable spill/release quantities whether in the water, air or ground.

Incident Reporting:

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 Captain Stephen Boudreaux at +18323376982 or Capt. Ben van Bommel at +31104415992.



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