Shell

Cargo Handling Sheet

NEODOL 91-8

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Revision 0

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

Product Details

Product Name:	NEODOL 91-8
IMO Product Name:	Alcohol (C9-C11) poly (2.5-9) ethoxylate
Chemical Family:	C9-11 Alcohol Ethoxylate
Product Code:	V2462

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

Physical Properties

Density:	996 kg/m3 (40 °C / 104 °F)
Dynamic Viscosity:	98 mPa.s (20 °C / 68 °F) 50 mPa.s (28 °C / 82 °F)
Vapor Pressure:	< 0.1 hPa (37 °C / 99 °F)
Boiling Point:	> 232 °C / > 450 °F
Melting Point:	ca. 15 °C / 59 °F
Flash Point:	159 °C / 318 °F
Appearance:	Slightly Viscous liquid

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: Combustible, not classified as a physical hazard under GHS criteria; classified as Toxic. 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
Inland Barge:	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 20

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading:	No; See Regional Requirements for shipments to Asia
N2 Blanket Required:	Yes, Product Quality requirement; Max 5% O2, see Notes below
Adjacent Space Purge:	No
Loading Temperature Range:	25 – 55 °C / 77 – 131 °F
Transit Temperature Range:	25 – 55 °C / 77 – 131 °F
Discharge Temperature Range:	25 – 55 °C / 77 – 131 °F
Maximum Heating Coil Temperature:	65 °C / 149 °F
Adjacent Maximum Cargo Temperature:	55 °C / 131 °F

Note 1: If Nitrogen blanket is in place and Carrier chooses to transhipment, carrier must reapply nitrogen blanket on the cargo, both on the discharging and receiving vessel, at their time, risk, and expense.
Note 2: N2 Blanket Guidance:
a. O2 level in tanks: 5% O2; **maintain1000 ppm O2 for shipments to Asia**
b. Vessel to maintain a constant nitrogen overpressure of 20 millibars or more during the voyage
c. DAILY LOG: During the voyage the vessel shall maintain a daily log of the following and the log shall be sent to the Shell Charterers/Planners at the time of discharge
1. Tank pressure 2. O2 level 3. Tank Temperature

Regional Requirements

Note 1: For shipments to Asia:

- The vessel's tanks, including those on any lightering vessels, must be nitrogen purged to 1000ppm oxygen prior to loading.
- After loading the tanks must be nitrogen padded to <1000 ppm oxygen
- The surveyor must record the tank oxygen content, dew point, and purging time in the cargo tanks, after purging. A copy of this record should be sent to the Charterers/Planners along with the survey report.

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 preferred. Highbaked phenolic and modified phenolic coatings may be accepted. Carrier to verify suitability of coating for products.

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

Banned Prior Cargo: Yes, Styrene or any other product which can polymerize.

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.)

Wall Wash Test:	Specification	Standard
Hydrocarbons	Pass	ASTM D1722
Chlorides	≤ 3.0 ppm	IMPCA 002-98
Colour Test	≤ 10 Pt/Co Max	ASTM D1209

Additional WWT for Coated Tanks if Prior Cargo is:

Prior Cargo	Wall Wash Test:	Specification	Standard
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

Link to: WWT Verification Form

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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