Shell

Cargo Handling Sheet

NEODOL 1

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Revision 12

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

Product Details

Trade Name:	NEODOL 1
IMO Product Name:	Undecyl Alcohol
Chemical Family:	Alcohols
Product Code:	V2705

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

Physical Properties

Density:	830 kg/m3 (20 °C / 68 °F)
Dynamic Viscosity:	Typical 17 mPa.s (20 °C / 68 °F)
Vapor Pressure:	0.4 (Pa) (25 °C / 77 °F)
Boiling Point:	245 °C / 473 °F
Pour Point:	11 °C / 52 °F
Flash Point:	121 °C / 250 °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.
Note 2: Hazard Identification: Combustible, Cat X product, classified as Toxic under IBC 2021. 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:	2
Inland Barge:	Double Hull
IMO Pollution Category:	X

IBC 16.2.6:	No
IBC 16.2.9:	Yes
Pre-Wash Required:	Yes
Compatibility Group:	USCG compatibility group 20

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading:	Yes, Product Quality requirement; Max 1000 ppm (0.1%) O2, see Notes below
N2 Blanket Required:	Yes, Product Quality requirement; Max 1000 ppm (0.1%) O2, see Notes below
Adjacent Space Purge:	No
Loading Temperature Range:	15 - 35 °C / 59 – 95 °F
Transit Temperature Range:	20 - 45 °C / 68 – 113 °F
Unloading Temperature Range:	20 – 45 °C / 68 – 113 °F
Maximum Heating Coil Temperature:	65 °C / 167 °F
Maximum Adjacent Temperature:	45°C / 113 °F

Note 1: If vessel is required to inert tanks, then only N2 will be accepted as an inerting medium.
Note 2: If Nitrogen blanket is in place and Carrier chooses to tranship, carrier must reapply nitrogen blanket on the cargo, both on the unloading and receiving ship, at their time, risk, and expense.
Note 3: N2 Blanket Guidance:
a. O2 level in tanks: Max 1000 ppm (0.1%) O2; See Regional Requirements.
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 record the following at least once a day and the record shall be sent to the Shell Charterers/Planners after the completion of unloading.

1. Tank pressure 2. O2 level 3. Tank Temperature.

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.

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. High baked and medium baked phenolic epoxy coating in good condition may be used if stainless not available.

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: Styrene or any other product which can polymerize; Phosphoric acid, Sulphuric acid, and Caustic

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 Chemicals charterer and present to cargo surveyor and loading master at loading terminal.)

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