



Shell Chemicals

Cargo Handling Sheet

Caradol MC28-02

Document Date: 07 February 2020
Revision 8

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

Product Details

Product Name:	Caradol MC28-02
Shipping Name:	Glycerol Propoxylated and Ethoxylated
Chemical Family:	Polyol
Product Code:	U3110

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

Physical Properties

Density:	1021 kg/m ³ (25 °C / 77 °F)
Dynamic Viscosity:	1130 mPa.s (25 °C / 77 °F)
Vapor Pressure:	<10 (hPa)
Boiling Point:	Not Available
Melting Point:	Not Available
Flash Point:	> 140 °C / > 284 °F
Appearance:	Clear colourless liquid, no odour

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

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 hulled
Inland Barges:	Double Hull
IMO Pollution Category:	Z
IBC16.2.6:	No
IBC 16.2.9:	No

Pre-Wash Required: No

Compatibility Group: USCG group 40, not compatible with group 12 Isocyanates.

Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading: No

N2 Blanket Required: Yes, < 5%; PQ requirement; See Regional Requirements

Adjacent Space Purge: No

Loading Temperature Range: 45 – 52 °C / 104 - 126 °F

Transit Temperature Range: 40 – 45 °C / 104 – 113 °F (International)
35 – 40 °C / 77 °F (Seraya to Rotterdam)

Discharge Temperature Range: 40 – 50 °C / 104 – 122 °F (International)
38 – 40 °C / 77 °F (Seraya to Rotterdam)

Maximum Heating Coil Temperature: < 100 °C / 212 °F

Adjacent Maximum Cargo Temperature: 55 °C / 131 °F

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 ship, at their time, risk, and expense.

Note 2: PQ = Product Quality

Note 3: N2 Blanket Guidance:

- a. O2 level in tanks to be maintained below 5% 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: On voyages between Saraya and Rotterdam, vessel should discharge at no higher than 40 °C / 104 °F to comply with receiving facility requirements. Slow pumping rate / additional ROB may be experienced.

Note 2: Inter-Europe Voyages: no N2 blanket required for voyages < 3 days

Note 3: EU barge voyages: Stainless Steel required

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: All coatings allowed except for Zinc; Carrier to verify suitability of coating; see Regional Requirements
Banned Prior Cargo: No
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	< 5 ppm	IMPCA 002-98
Color Test	< 5 Pt/Co Max	ASTM D1209
Appearance:	Clear, free of suspended matter	ASTM D4176
Pernamganate:	> 30 minutes	ASTM D1363

Additional WWT for Coated Tanks if Prior Cargo is:

Prior Cargo	Wall Wash Test:	Specification	Standard
Oils, Waxes, Veg Oils, Fame	NVM	100 ppm	ASTM D1353
Acids, Alkalis	PH Test	6 – 8	ASTM E70

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.



Shell Chemical LP
PO Box 4407
Houston
Texas 77210
USA
Tel +1 866 897 4355
Internet <http://www.shell.com/chemicals>

Disclaimer

The information contained in this publication is, to the best of our knowledge, true and accurate, but any recommendations or suggestions that may be made are without guarantee, since the conditions of use are beyond our control. Furthermore, nothing contained herein shall be construed as a recommendation to use any product in conflict with existing patents covering any material or its use.

Shell Chemicals

The expression "Shell Chemicals" refers to the companies of the Shell Group of companies that are engaged in the chemical businesses. Each of the companies that make up the Shell Group of companies is an independent entity and has its own separate identity.