



**Shell Chemicals**

# Cargo Handling Sheet

Caradol SP30-47

Document Date: 14 February 2020  
Revision 2

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

## Product Details

|                  |  |
|------------------|--|
| Product Name:    | Caradol SP30-47  |
| Shipping Name:   | Acrylonitrile-Styrene Copolymer Dispersion in Polyether Polyol |
| Chemical Family: | Polyols  |
| Product Code:    | U318N  |

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

## Physical Properties

|                    |  |
|--------------------|--|
| Density:           | 1,020 kg/m <sup>3</sup> at 25 °C / 77 °F   |
| Dynamic Viscosity: | 5,880 mPas at 20 °C / 68 °F<br>452 mPas @ 80 °C / 176 °F<br>50 mPas @ >100 °C / 212 °F |
| Vapor Pressure:    | Data Not Available   |
| Boiling Point:     | Data Not Available   |
| Melting Point:     | -15 °C / 5 °F  |
| Flash Point:       | > 200 °C / 392 °F  |
| Appearance:        | White viscous liquid; odourless  |

**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:          | 3; Must be Double Hulled |
| Inland Barges:          | Double Hull              |
| IMO Pollution Category: | Y                        |

|                      |   |
|----------------------|---|
| IBC 16.2.6:          | Yes   |
| IBC 16.2.9:          | No  |
| Pre-Wash Required:   | Yes   |
| Compatibility Group: | USCG group 20, not compatible with group 12 |

### Cargo Handling Requirements

|                                     |   |
|-------------------------------------|---|
| N2 Purge Cargo Tanks Prior Loading: | No  |
| N2 Blanket Required:                | Yes, PQ requirement; <5% O <sub>2</sub> ; See Regional Requirements             |
| Adjacent Space Purge:               | No  |
| Loading Temperature Range:          | 25 – 50 °C / 77 – 122 °F  |
| Transit Temperature Range:          | 25 – 50 °C / 77 – 122 °F (International)<br>Ambient – 50 °C / 77 °F (EU barges) |
| Discharge Temperature Range:        | 50 – 60 °C / 77 – 140 °F  |
| 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 transship, 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. O<sub>2</sub> level in tanks to be maintained below 5%
- b. Vessel to maintain a constant nitrogen overpressure of 20 millibars or more during the voyage
- c. Vessel to keep a daily N<sub>2</sub> log of each tank:
  1. Tank pressure
  2. O<sub>2</sub> 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:** Inter-Europe Voyages: no N<sub>2</sub> blanket required for voyages ≤ 3 days

**Note 2:** EU Barges - Stainless steel required

**Note 3:** EU Barges - can load on top without cleaning prior cargo SC48-08 / SP44-10V / SP42-15V / SP39-20V / SP37-25V / SP30-47 if the minimum quantity to load is > 400mt and residual prior cargo is < 0.1mt

## 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:** None

**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 5 ppm                               | IMPCA 002-98 |
| Color Test      | Max 5 Pt/Co Max                         | ASTM D1209   |
| Appearance:     | Clear, free of suspended matter & odour | 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.



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