



# Aster

**Aster Chemicals**

## Cargo Handling Sheet

Seradol MD36-21

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Revision 1.0

***Cargo Handling Sheets are for the use of vessels chartered on behalf of Aster.***

## Product Details

Product Name:	Seradol MD36-21
IMO Product Name:	Glycerol, Propoxylated and Ethoxylated
Chemical Family:	Polyol
Product Code:	U311E

## Physical Properties

Density:	1,021 kg/m <sup>3</sup> (25 °C / 77 °F)
Dynamic Viscosity:	800 mPa.s (25 °C / 77 °F)
Vapor Pressure:	Not Available
Boiling Point:	Not Available
Melting Point:	Not Available
Flash Point:	> 180 °C / > 356 °F
Appearance:	Clear, colourless, odourless

**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: Not classified as a physical hazard or health hazard under GHS criteria; Polymerises exothermically with di-isocyanates at ambient temperatures. 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, 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.

## Cargo Handling Requirements

N2 Purge Cargo Tanks Prior Loading: Not a Product Quality requirement

N2 Blanket Required: Yes, Product Quality requirement; Max 5% O<sub>2</sub>, see Notes below and Regional Requirements.

Adjacent Space Purge: No

Loading Temperature Range: Ambient – 40 °C / 104°F

Transit Temperature Range: 40 – 55 °C / 104 – 131 °F (International)  
Ambient – 45 °C / 113 °F (EU Barges)

Discharge Temperature Range: 40 – 55 °C / 104 – 131 °F (International)  
Ambient – 45 °C / 113 °F (EU Barges)

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

Maximum Adjacent 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:** N<sub>2</sub> Blanket Guidance:

- a. O<sub>2</sub> level in tanks to be maintained below 5% O<sub>2</sub>, 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 Aster Charterers/Planners after the completion of unloading.
  1. Tank pressure
  2. O<sub>2</sub> level
  3. Tank Temperature

## Regional Requirements

None

## 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.

**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 Aster 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
Colour Test	Max 5 Pt/Co	ASTM D1209
Appearance:	Clear, free of suspended matter & odour	ASTM D4176
Permanganate:	> 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	6.9 – 7.1	ASTM E70

Refer to Aster.com.sg for the WWT Verification form under the Cargo Handling Sheet section.

## 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 Aster Marine Technical Advisor.

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