



**Shell Chemicals**

# Cargo Handling Sheet

Propylene C3

Document Date: 21 July 2017  
Revision 5

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

## Product Details

Product Name: Propylene C3  
Shipping Name: Propylene  
Chemical Family: Gas, Lower Olefins  
Product Code: X2121, X2125

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

## Physical Properties

Density: 610 kg/m<sup>3</sup> (0 °C / 32 °F)  
Vapor Pressure: 600 kPa (0 °C / 32 °F)  
Boiling Point: -47.7 °C / -53.9 °F  
Melting Point: -185.2 °C / -301.4 °F  
Flash Point: -108 °C / -162.4 °F  
Appearance: colourless

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

**Note 2:** This product is a static accumulator.

**Transhipment** Prior to arranging transhipment, Charterers must agree to Owner's proposed plan

## Regulatory Details

IMO Ship Type: 2G/2PG  
IGC Hazards: Flammable

## Cargo Handling Requirements

Purge Cargo Tanks Prior Loading: Condition with product to expel N<sub>2</sub>  
Pre-load Purge Oxygen Content: < 0.3%  
Loading Temperature Range: See notes  
Transit Temperature Range: As per load

Discharge Temperature Range: As per load

## Regional Requirements

**Note 1:** Inland Barge EUAF- ADN Type G

**Note 2:** For fully pressurized tanks (18 barg) load ambient. For semi pressurized tanks (0.7 barg) load at -48 °C.

Vessels arriving at dock under nitrogen are reminded of the possibility of super cooling when commencing loading. This is caused by the Propylene liquid, pumped into the vessels tanks, evaporating very quickly in order to reach equilibrium at approximately 5 bars at 0 °C.

Where a ship's tanks are presented under nitrogen condition, it is preferred to commence loading with warm cargo vapour first to a sufficient pressure. Where the facility is unable to provide warm cargo vapour, the loading operation must be commenced at a very slow rate. In either case the ship's cargo tank temperature must not fall below the cryogenic limits.

**Note 3:** Shell Moerdijk does not have the facility to purge with warm Propylene vapours in order to displace nitrogen in the vessel tanks to overcome super cooling. It is thus recommended that vessels arriving at Shell Moerdijk be gassed up with Propylene at a vapour pressure of approximately 5 bars.

## Tank Acceptance Requirements

Dew-point: < -25 °C / -13 °F

Peroxide Level: < 5 ppmw

Prior Cargoes: Consult Shell Chemical Responsible Charterer

## 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 (44) 207-934-7777.

Jones Act Vessels: call the Shell 24 hr. incident number at (1) 713-241-2532. The USA National Response Center telephone number is 1-800-424-8802.

For additional marine cargo handling advice or information, contact Captain Stephen Boudreaux at +17132413945 or Capt. Ben van Bommel at +31104415992.



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