

# Marine DEF

## Marine Grade Diesel Exhaust Fluid

### Features & Benefits

- Meets ISO 18611-1:2014
- Non-toxic, non-polluting, non-hazardous and non-flammable
- Reduces harmful emissions
- Increases fuel efficiency

### Typical Results

Test	Units	Typical	Min	Max
Urea Content	% (m/m)	40.1	39.0	41.0
Density at 20°C	kg/L	1.1142	1.050	1.177
Refractive Index at 20°C	-	1.3958	1.3934 <sup>1</sup>	1.3982 <sup>2</sup>
Alkalinity (as Ammonia)	% (m/m)	<0.1	-	0.5
Biuret	% (m/m)	0.3	-	0.8
Aldehydes	mg/kg	1.3	-	100
Insoluble matter	mg/kg	2.6	-	50
Phosphates	mg/kg	0.3	-	1
Calcium	mg/kg	<0.1	-	1
Iron	mg/kg	<0.1	-	1
Copper	mg/kg	<0.1	-	1
Zinc	mg/kg	<0.1	-	1
Chromium	mg/kg	<0.1	-	1
Nickel	mg/kg	<0.1	-	1
Aluminum	mg/kg	<0.1	-	1
Magnesium	mg/kg	<0.1	-	1
Sodium	mg/kg	<0.1	-	1
Potassium	mg/kg	<0.1	-	1
Identity (FTIR)	-	Identical to reference	-	-

<sup>1</sup> Minimum Refractive Index based on 0.0% Biuret

<sup>2</sup> Maximum Refractive Index based on 0.8% Biuret

**MARINE DEF** (Diesel Exhaust Fluid) is a 40% Aqueous Urea Solution (AUS 40) manufactured with high purity urea mixed with quality electro deionized (EDI) water designed to meet the specifications of ISO 18611-1:2014 for NO<sub>x</sub> emissions of large diesel engines on ships.

**MARINE DEF** is produced to exceed the quality characteristics defined in ISO 18611-1. Typical results of the contaminants analysed are far lower than the maximum set out by the ISO standard. Typical results are within the stringent quality specification outlined in ISO 22241-1:2019 for DEF contaminants.

**MARINE DEF** is certified as a Marine Diesel Exhaust Fluid by the American Petroleum Institute.

SIZE	SKU
275 & 330 GAL	513303