



NitroPure DEF

TECHNICAL DATA SHEET

NitroPure DEF: Engineered for Purity & Performance

Sub-header: The trusted choice for cleaner engines, guaranteed compliance, and operational peace of mind.

SECTION 1: What is **NitroPure DEF**?

NitroPure DEF is a high-purity urea solution (32.5%) specifically engineered for modern Selective Catalytic Reduction (SCR) systems in diesel vehicles.

It is NOT a fuel additive. It is stored in a separate tank.

Precision-formulated, it converts harmful nitrogen oxides (NOx) into harmless nitrogen and water vapor.

A mandatory requirement for Euro 4/5/6 (and beyond) heavy-duty vehicles, cars, vans, and machinery.

- SECTION 2:** Why Choose NitroPure DEF?
- Premium Quality Source: We use exclusively high-quality industrial-grade urea from SABIC, ensuring optimal purity and performance for your SCR system.
 - Guaranteed Compliance: Meets and exceeds ISO 22241, DIN 70070, and VDA standards. Stay legal, avoid fines, and pass emissions tests with confidence.
 - Protects Your Investment: Prevents costly SCR system damage and maintains peak engine efficiency and fuel economy.
 - Operational Reliability: Consistent quality batch after batch, minimizing downtime and maintenance risks for your fleet.

Property	Specification
Urea Content	32.5% ± 0.7%
Density @ 20 °C	1.087 – 1.093 g/cm³
Refractive Index @ 20 °C	1.3814 – 1.3843
pH	9.0 – 10.0
Appearance	Clear, colorless liquid
Odor	Slight ammonia odor
Solubility	Fully miscible in water
Crystallization Point	–11 °C
Boiling Point	~100 °C
Flash Point	Not applicable (non-flammable)

Application of NitroPure DEF

1. Selective Catalytic Reduction (SCR) Systems

This is the primary and most important application.

NitroPure DEF is injected into the exhaust stream of diesel engines equipped with SCR technology. Inside the hot exhaust, it decomposes into ammonia, which reacts with nitrogen oxides (NO_x) over a catalyst and converts them into:

- Nitrogen (N₂)
- Water vapor (H₂O)

This dramatically reduces harmful emissions.

2. Automotive Industry

Used in:

- Passenger diesel cars
- SUVs and light commercial vehicles
- Heavy-duty trucks and buses
- Long-haul transport fleets

3. Off-Road & Industrial Machinery

NitroPure DEF is widely used in:

- Construction machinery (excavators, loaders, bulldozers)
- Mining equipment
- Agricultural tractors and harvesters
- Forestry machinery

4. Marine & Shipping

SCR systems using **NitroPure DEF** are increasingly installed in:

- Ferries
- Cargo ships
- Offshore vessels

5. Power Generation

Diesel generators—especially large stationary units—use Nitro Pure to reduce NO_x emissions in:

- Hospitals
- Data centers
- Remote industrial sites
- Backup power systems

6. Environmental Compliance

Many industries use **NitroPure DEF** to meet:

- Government emission regulations
- Environmental permits
- Corporate sustainability targets

It allows companies to operate diesel equipment without exceeding NO_x limits.

7. Fleet Management & Logistics

NitroPure DEF is essential for:

- Long-distance trucking
- Bus fleets
- Delivery vehicles

Benefits:

- Lower emissions
- Improved fuel efficiency (SCR allows engines to run hotter and cleaner)
- Compliance with road and environmental laws

