

What happens if I run out on the road

Your vehicle's tank will normally contain up to two weeks supply of AdBlue and, provided the tank is topped up at the depot weekly, drivers will not normally need to fill-up on the road. Drivers may want to carry a small 10 litre plastic container of AdBlue in the vehicle in case they run-out, providing enough for about 400 miles of driving. For trucks registered after October 2007 an on-board-diagnostics vehicle sensor will ensure that genuine AdBlue is present in the special tank. If AdBlue runs-dry, the Engine Management System will progressively and gradually reduce engine power by 50% to a limp-home mode over a distance of 100 Km.

Can I use AdBlue with BioDiesel

Biodiesel and SCR are compatible even if 100% Biodiesel is used. Of course all special material demands on the engine running with biodiesel have to be considered for the complete SCR-equipment on the truck. That means that the truck operator needs a confirmation of the truck producer for the use of biodiesel on a certain truck.

Using biodiesel the exhaust gas contains more NOx and the AdBlue consumption of the SCR equipment will be slightly higher if used at 100% biodiesel but not at typical 5% additions.

Is AdBlue corrosive

AdBlue is non-toxic and poses no serious risk to humans, animals or the environment if properly handled. The product is slightly alkaline with a pH of approx 9.0 so should not be kept in contact with aluminium, brass, mild steel. Stainless Steel and Plastic tanks and fittings are recommended. Prolonged skin contact may cause irritation. CEFIC guidance available at www.petrochemistry.net [Automotive Grade Urea Group] provides the latest guidance.

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FAQs ABOUT SCR TECHNOLOGY AdBlue®

What is SCR Technology

SCR Technology (Selective Catalytic Reduction) is the reduction of the emissions that are generated during the combustion of an engine through a catalytic converter in the exhaust system of the vehicle.

The main components of the SCR system are the SCR catalyst, the AdBlue injection unit, the AdBlue tank and the AdBlue dosing control unit. The harmful NOx molecules in the exhaust are converted to harmless nitrogen and water. This happens when NOx reacts inside the catalyst with the ammonia in the AdBlue injected into the exhaust pipe upstream of the catalyst, where its urea molecules react with heat and water to form the ammonia needed.

SCR Technology needs a continuous supply of AdBlue (maximum quality Urea solution at 32.5%) as a reducing agent AdBlue is dispensed into the AdBlue tank of the vehicle; this is separate to the diesel tank. AdBlue NEVER goes into the engine, it is purely an exhaust additive.

What are the principal advantages of SCR Technology?

- **Fuel saving:** It is estimated that Euro 4 and Euro 5 vehicles equipped with SCR Technology obtain a fuel saving of approximately 5% (Euro 4) to increase to 7% (Euro 5).
- **Technology prepared for the future:** SCR Technology not only fulfills the emission levels of Euro 4 and Euro 5 but also the ones of Euro 6.
- **Respects the environment**
- **Cost savings:** Possible cost savings as the SCR system improves engine efficiency; are longer service intervals and higher engine uptimes.
- **Have all manufacturers chosen the same technology?**
 - **Euro 4 fulfillment:** Manufacturers including Cummins, Mercedes, Iveco, Volvo, Renault and DAF have chosen SCR Technology. Man and SCANIA have chosen EGR Technology.
 - **Euro 5 fulfillment:** Almost all manufacturers' vehicles, use this SCR Technology.
 - **Euro 6 fulfillment:** All manufacturers' vehicles will have to use the SCR Technology.

// DAF Europe have no hesitation in recommending BlueCat Adblue supplies and equipment for use in all SCR equipped DAF trucks //



Questions & Answers

AdBlue® The solution in Australia and New Zealand to reduce emissions for engines and generators.



BlueCat aims to be the Number One supplier of choice for AdBlue solutions in Australia and New Zealand, with easy ordering and economic & rapid delivery in bulk or packages direct to you from Australian based manufacturing facilities or via local distribution partners.



Euro IV, Euro V, Euro VI and Tier 4 are emission standards which come in the form of a series of European directives. They define the limits for exhaust emissions of new vehicles sold in the EU and Australia. Emissions of NOx are regulated for most vehicle types, including cars, trucks, trains, tractors and similar machinery, barges, but excluding seagoing ships and aeroplanes. For each vehicle type, different standards apply. Non-compliant vehicles cannot be sold in the EU or Australia, but new standards do not apply to vehicles already on the roads. No use of specific technologies is mandated to meet the standards, though available technology is considered when setting the standards.

FAQs ABOUT AdBlue®

What is AdBlue?

AdBlue is a light, colourless 32.5% Aqueous Urea Solution used as a fluid in the latest generation of diesel-powered Euro IV & Euro V Trucks. AdBlue must comply with the ISO22241 specification and is known as automotive grade urea solution, AUS 32 and AdBlue®.

How does AdBlue work

AdBlue is stored in a separate tank on the vehicle. It is precisely metered into the hot exhaust manifold where the urea solution breaks-down into Ammonia and reacts with exhaust gasses in the presence of a catalytic converter. The oxides of nitrogen formed at combustion are converted into harmless elementary nitrogen and water. This method is called Selective Catalytic Reduction (SCR). It is a common misconception that AdBlue is a fuel additive.

Why do I need to use AdBlue

All trucks & buses registered after October 2006 must be Euro IV or Euro V compliant and most will require AdBlue.

What is the relevant legislation

EURO IV is the emission standard for vehicles that were introduced into the EU and Australia in 2005, effective from 2006. It limits Heavy Goods Vehicles (HGVs) emissions to 3.5 g/kWh of NOx and 0.02 g/kWh of PM. It was replaced by Euro V in 2009, It limits diesel Heavy Goods Vehicles (HGVs) emissions to 2.0 g/kWh of NOx and 0.02 g/kWh of PM. Euro VI will take effect in 2013 and will limit HGVs emissions to 0.4 NOx and 0.01 g/kWh of PM.

How will heavy vehicles manufacturers satisfy the legislation

The heavy vehicle manufacturers have decided to execute two different technologies to adapt to these rules:

- Selective Catalytic Reduction (SCR).
- Exhaust Gas Recirculation (EGR).

How much AdBlue will a vehicles use

The consumption of AdBlue is 3-4 percent that of diesel for a Euro IV engine and 5-7 percent for a Euro V engine, depending on driving, load and road conditions.

AdBlue Consumption as percentage of diesel consumption	Euro IV	Euro V
Light Duty [City Traffic]	3.23%	4.79%
Medium Duty [Motorway Cruising]	4.14%	6.15%
Heavy Duty [Over the Alps]	4.23%	6.29%

The consumption in litres can also be calculated using the guideline figures in the table below.

AdBlue Consumption in Litres	Litres per week	Litres per month	Litres per year
44-tonne truck	30-40	160	2000
18-tonne runabout	20-25	100	1200

(Source - DAF Trucks, AdBlue Conference, Brussels, June 2005)

As vehicles will typically be fitted with a 70 or 90 litre AdBlue tank, most vehicles will need to be topped-up with AdBlue every week-to-ten-days.

What is BlueCat

BlueCat is our brand of AdBlue solution. BlueCat AdBlue is officially licensed by the VDA and fully complies with the official ISO 22241 standard.

In which forms will BlueCat AdBlue be available

- Large users can purchase AdBlue in bulk from 4000-25000 L.
- Smaller users can choose from a variety of pack sizes 1000 litre IBCs, 200 litre and 20 litre drums to 10 litre jerricans.
- Alternatively a user can refill the vehicles AdBlue tank at Tru-Blu Oil's manufacturing facility in Bayswater VIC or from a BlueCat authorised reseller.

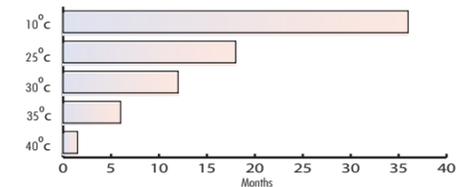
What equipment will I need

IBC's are the popular pack size for AdBlue, BlueCat recommend an electric stainless steel pump, meter and dispensing unit with a nozzle cut off to prevent crystallization of the product. Many standard dispensing systems are incompatible with AdBlue. Only Stainless Steel and plastic equipment with special seals must be used in all AdBlue applications. Smaller hand operated pumps are available for entry level users of AdBlue, your Tru-Blu Oil account manager will be happy to recommend the equipment which will suit your requirements.

How must the AdBlue be stored

AdBlue must remain at a temperature between -11° C and +30° C preferably out of direct sunlight. Insulated tanks are available from Tru-Blu Oil.

The life of AdBlue is effected by a number of different factors including: whether the product is stored in a vented or unvented container, the temperature and any contaminates. Prolonged exposure to temperature extremes can have varying effects on storage life. The table below shows the effects of prolonged extreme temperature on AdBlue's storage life.



How do I know BlueCat is a quality AdBlue product

The VDA has been appointed by the major OEMs to ensure that the requirements of ISO 22241 are being adhered during the manufacturing of diesel exhaust fluid carrying the AdBlue® trademark. The VDA actively police any violation of its licences, trademarks and quality of products offered in the market place worldwide and heavy penalties can apply to such violations. The AdBlue® trademark brings peace of mind. If you use a product manufactured by a VDA licenced company you can be assured the product is of the correct worldwide standard for your vehicle engine. If the finished product you are using is not manufactured by a VDA licenced manufacturer don't take the risk. BlueCat® AdBlue® is fully VDA licenced.

Can I use other non VDA-approved products

There have been reports of substandard non VDA-approved products, manufactured using low-grade urea or other nitrogen-containing chemicals, in Australia and New Zealand. Do not use anything other than fully VDA-approved AdBlue. A SCR exhaust treatment system costs approx. AUD\$5000. They are irreparable when damaged and must be replaced. Furthermore, the engine will be severely de-rated if the SCR system is damaged. The use of anything else other than VDA approved products can cause this irreversible damage and at a minimum considerable inconvenience and loss of productivity if the engine is de-rated.



AdBlue Products

1000 Litre IBCs



1000 Litre IBCs



5000, 7500 & 1000 litre self-bundled tanks



10 Litre Cans



200 Litre Tank

