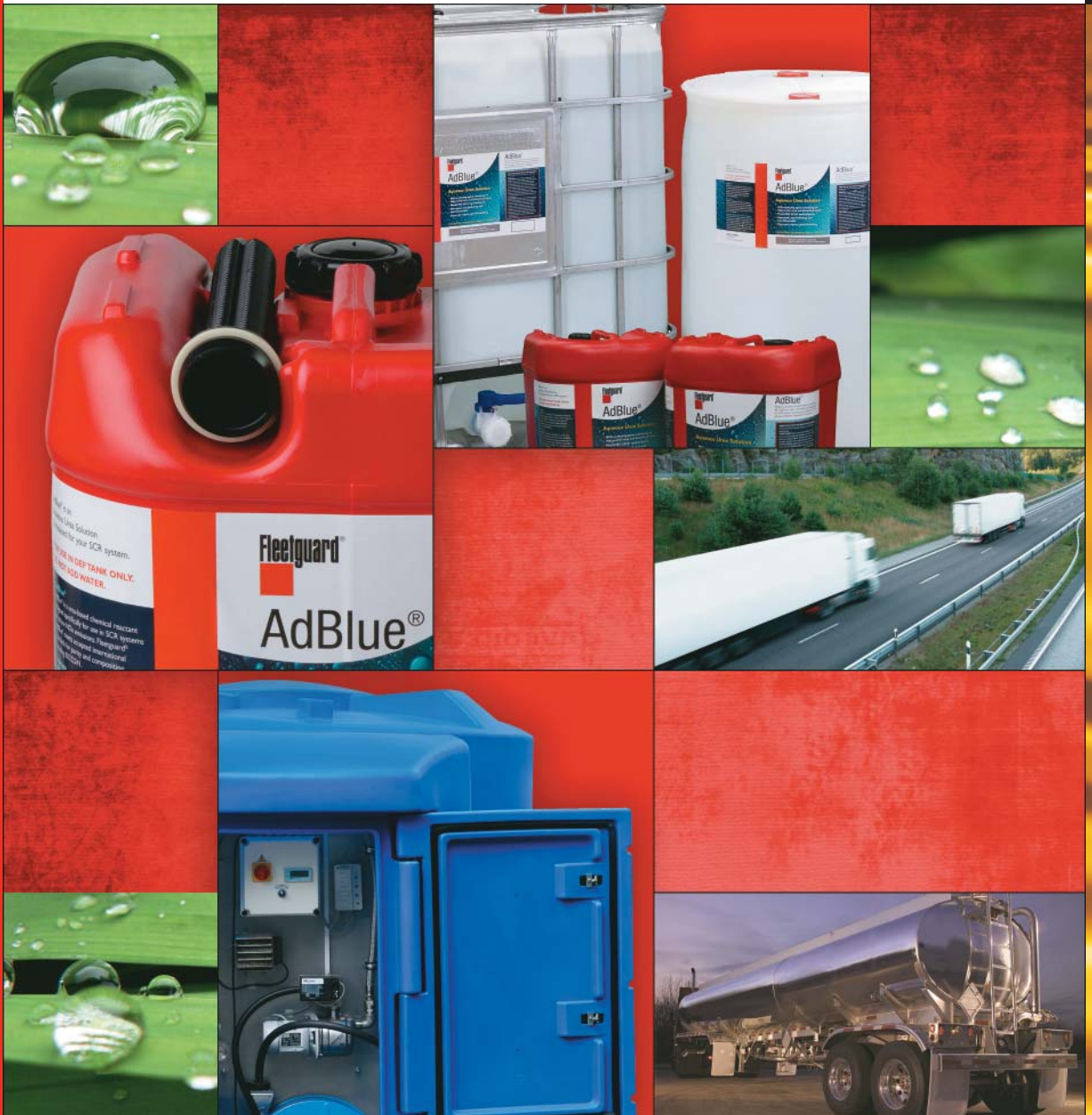


Fleetguard[®]



Fleetguard AdBlue[®] Packaged & Bulk Supply

CHEMICALS





Emissions Regulations: The Right Technology Matters

In today's environmentally conscious world, vehicle emissions are becoming more stringent. Cummins Filtration is committed to ensuring the products we manufacture and sell have a positive effect on the environment.

From user-friendly filters to environmentally-friendly coolants and Fleetguard AdBlue[®], our goal is to supply quality products that keep your engines running cleaner, longer.

Experience matters

Cummins Filtration is an expert in emissions technology. As a systems provider, we manufacture Fleetguard AdBlue[®], a reagent used in the conversion of harmful exhaust emissions as well as catalytic mufflers for vehicle systems, supply dispensing equipment and partner with major, global companies to deliver Fleetguard AdBlue[®] to the market. This level of expertise is unequalled in the heavy duty automotive industry in Australia.



**Fig 1. Cummins Filtration AdBlue[®]
Production facility in Melbourne**

Cummins Filtration is licensed to use the AdBlue[®] trademark which requires compliance with the German Association of the Automotive Industry's (VDA) strict quality control requirements. The VDA owns the AdBlue[®] name.

Cummins Filtration's manufacturing facility (Fig1) was audited by the VDA-QMC in November 2010 and became the first manufacturer outside of Europe to be voluntarily accredited by the VDA in the processes required to manufacture AdBlue[®].

The technology

Many engine manufacturers, including Cummins, are increasingly using **Selective Catalytic Reduction (SCR)** technology in their engines' after treatment system to meet legislated emission requirements.

SCR systems require a reagent as part of the process to convert toxic Nitrogen Oxide (NOx) into harmless Nitrogen and Water. That reagent comes in the form of Fleetguard AdBlue[®], an Aqueous Urea Solution of 32.5% Urea that is mixed in exacting proportions of deionised water (AUS32). This ratio is important to meet the correct rate of emission control requirements.



Fleetguard[®] AdBlue[®]: Made in Australia to International Quality Standards

How it works

Fleetguard AdBlue[®] is injected into the exhaust system via an onboard dosing system in accordance with sensors feeding back information about the amount of NOx in the exhaust gases. The Fleetguard AdBlue[®] heats up in the exhaust pipe and converts to ammonia.

The ammonia reacts with the catalyst in the specially designed muffler and converts harmful NOx into water and nitrogen. The On Board Diagnostic (OBD) adjusts the amount of Fleetguard AdBlue[®] that is injected into the exhaust to control the levels of NOx released via the tailpipe. The diagram in Fig 2 explains how Fleetguard AdBlue[®] is injected.

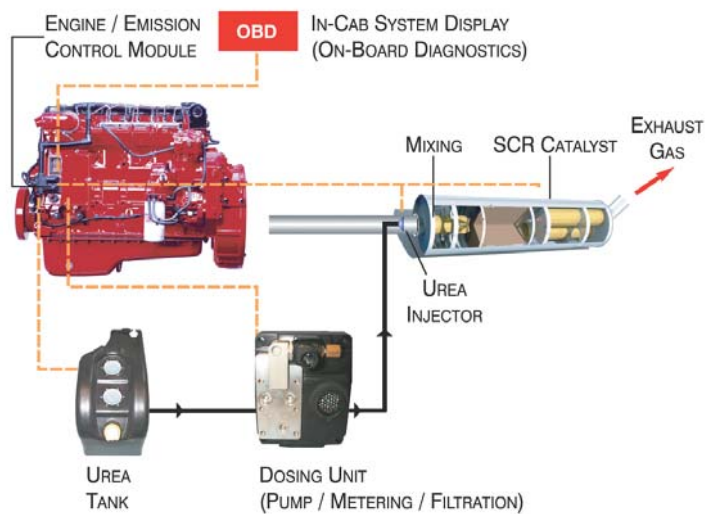


Fig 2. How a SCR system works

Quality without compromise

SCR exhaust systems utilise sophisticated equipment to control exhaust emissions. Ensuring they operate reliably and cost effectively is dependent upon the reagent product that is used with them.

Quality is the key in maintaining proper system operation, compliance with emissions regulations and minimising the chance of damage to the SCR system, which can lead to very expensive repairs.

Cummins Filtration Fleetguard AdBlue[®] meets high purity requirements, as defined by the International Organisation for Standardisation ISO 22241-1.

Additionally, testing and handling of Fleetguard AdBlue[®] is set out as per ISO 22241-2/3. By manufacturing, testing and handling Fleetguard AdBlue[®] to ISO standards we are safeguarding our customers' investment in their equipment. Our Fleetguard AdBlue[®] is produced through one of two approved processes which meets ISO standards. We only use high purity synthetic urea in our production process, not re-used agricultural urea products. Using inferior and diluted products can effect engine performance and risk non-compliance with legislated emissions regulations.



Bulk AdBlue® Delivered Right To Your Door

Packaged AdBlue®

Fleetguard AdBlue® is available for OEM First Fill and Aftermarket:



Part Number	Description
CC36058	10 litre
CC36059	20 litre
CC36060	205 litre
CC36061	1000 litre

Bulk AdBlue®

- Available in all major Australian locations
- We deliver the product to you, unloaded into your bulk tank
- Deliveries from 4,000 litres to 20,000 litres as required
- Our commitment is to deliver reliably, on time and in full.

Why buy bulk?

- Bulk on-site takes your AdBlue® supply management problems away
- Bulk on-site eliminates handling problems
- Bulk on-site improves the efficiency of your fleet operation
- Bulk on-site eliminates potential safety problems.

Bulk AdBlue® equipment options

AdBlue® requires specific storage and handling conditions to ensure it is not contaminated or degraded. Cummins Filtration has been working with leading equipment manufacturers to ensure the best and most cost effective solutions are available to our customers for the storage and handling of bulk Fleetguard AdBlue®. Some of these options are illustrated below:



Blue Master










Dispenser



Slimline

AdBlue® Pumping Equipment

	Product Code	Description
	FP-332080 AP-RP90P	Hand Operated Transfer Pumps Rotary Barrel Pump C/W Adaptor, Hose & SS Nozzle Standard Rotary Pump & Adaptor Only
	FP-155170	Gravity Feed Kits Gravity Feed Kit C/W 4m Hose, IBC Adaptor & Manual Nozzle
	AE-PPM90ADB FP-A10 FP-A10MF	Nozzles Manual On/Off Nozzle Only With Swivel Automatic Standard Shut Off Nozzle Automatic Shut Off Nozzle C/W Magnet
	AE-CK24ADPM	Flow Meters Inline Digital Turbine Meter
	FP-201AA0 FP-201AA1	12V Electrically Operated Kits 12v 205l Drum Kit C/W 6m Hose, Suction Kit & Manual Nozzle 12v IBC Kit C/W 6m Hose, Suction Kit & Manual Nozzle
	AE-KP21A AE-KP21M	Air Operated 205L & IBC Kits 2:1 Ratio Air Operated IBC Kit C/W 4m Hose & Automatic Nozzle 2:1 Ratio Air Operated IBC Kit C/W 4m Hose & Manual Nozzle <i>*Air Operated Kits Do Not Come With Inline Digital Meter</i>
	FP-201B10	Electrically Operated IBC Kits 240v Electric IBC Kit C/W 6m Hose, Bottom Suction Kit, Meter & Auto Nozzle

Warranty: All equipment has a 12 month warranty from date of purchase

AdBlue® Facts

- While Fleetguard AdBlue® may have a slightly pungent odour, similar to that of ammonia, it is non-toxic, non-polluting and non-flammable.
- Fleetguard AdBlue® is corrosive to aluminium (over time) and other materials. Tank, packaging and dispensing equipment suppliers take this into account and only use approved materials for their products.

- Fleetguard AdBlue® shelf life is a function of ambient storage temperature. AdBlue® will degrade over time depending on temperature and exposure to sunlight. If stored between -10 and +32 Degrees Celsius the shelf life will be one year.
- Fleetguard AdBlue® consumption is expected to be approximately 2% - 6% of fuel consumption, dependent on vehicle application, duty cycle, geography, ratings and the combination of technologies used to achieve emission targets.
- In the unusual event that AdBlue® becomes frozen it can be thawed without compromise to the quality of the product.

Contact your local Fleetguard Business Manager today for all your bulk AdBlue® requirements

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