



# ADBLUE<sup>®</sup> ADDITIVE



Product ID: 80059

## Product description

Reliably cleans and prevents crystal formation in AdBlue<sup>®</sup> (urea) dosing systems and SCR catalytic converters. Prevents performance loss, engine malfunction and costly repairs.

## Benefits

- ✓ Cleans and prevents crystal formation in AdBlue<sup>®</sup> metering systems, SCR catalytic converters and AdBlue<sup>®</sup> injectors.
- ✓ Protects the AdBlue<sup>®</sup> metering systems and SCR catalytic converters and ensures long term reliability.
- ✓ Prevents SCR clogging and increases SCR lifetime.
- ✓ Reduces foaming, especially compared to alternative products.
- ✓ Suitable for both professional and consumer use.
- ✓ Works both curatively as well as preventively.
- ✓ Non-hazardous, non-corrosive, non-irritant.

## Usage

For all diesel engines with an AdBlue<sup>®</sup> metering system.

## Direction

Press the required amount of additive in the dosing chamber of the bottle. Add this volume to the bottle with urea solution (AdBlue<sup>®</sup>) before emptying this bottle into the AdBlue<sup>®</sup> reservoir. Use with every refill.

**Note:** In systems where urea injection is supported by air pressure, increased foaming may occur. Do not add to the diesel fuel tank!

## Dosage

One 250 ml dosing bottle treats 100 L of urea fluid. Use 25 ml for each 10 L of urea fluid. **Do not overdose!**

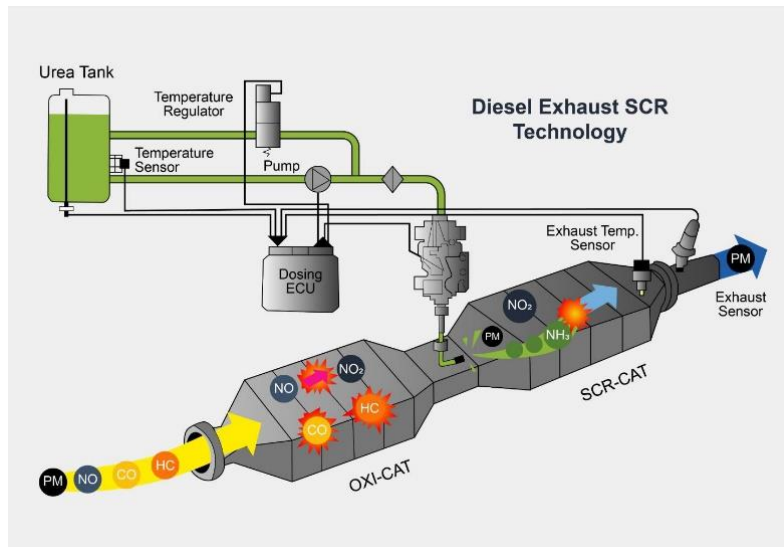
## Technical specification

Density g/cm <sup>3</sup> :	1,00
pH value:	9
Colour:	blue
Odour:	characteristic



## SCR Catalytic Converter

To clean modern diesel engines, car manufacturers rely on SCR catalytic converters to reduce nitrogen oxide (NOx) emissions. For this purpose, an aqueous urea solution is injected.



## Deposits

When the required high temperatures in the exhaust system are not reached due to an unfavourable driving profile, the conversion to nitrogen ( $N_2$ ) and water ( $H_2O$ ) cannot take place optimally. As a result, white crystal deposits form on the urea dosing system, the injector and the SCR catalytic converter. Consequently the NOx reduction does not take place properly and increased emission values are achieved. Engine malfunction, increased emission, loss of performance and blockage can be the result.



We distinguish 3 types of deposits:

- Biuret
- Triuret
- Cyanuric acid

## Clean up



Before

After



## Frequently Asked Questions

### Does the AdBlue additive only work preventively or does it also clean up?

Unlike several other brands, the TecLub AdBlue additive also works *curatively* and not only *preventively*. This means it will also remove existing crystals already built up in the SCR system.

### What is the difference with a product like Clearnox or Optispray?

Clearnox or Optispray are basically regular AdBlue-fluids with extra additives to *prevent* crystal build up in the SCR-system. Although they *prevent* new crystal build up, they *do not cure or remove* existing crystals and therefore will not resolve existing problems. In addition you will need to use these more expensive fluids continuously to keep the SCR-system clean.

### Will the AdBlue stay within the ISO 22241 specification when I add this additive?

Yes, the AdBlue will stay within the ISO 22241 specification after adding it to AdBlue.

### Does the manufacturer warranty of the car and/or AdBlue supplier still apply during use?

Addition of this product does not change the standard of the urea fluid and therefore does not affect the warranty.

### Why the comment "Do not overdose"? Is this a real danger?

One bottle of AdBlue additive (250 ml) is sufficient for 100 L of urea liquid. The recommended dosage should not be exceeded as all products have an optimum dosing from a chemical as well as cost point of view. Adding more than recommended does not increase effectiveness. In case of a 5-fold overdose the AdBlue to which it is added runs out of specification which one would like to prevent. Our product is extensively no-harm tested even with higher dosing.

### Is the AdBlue additive hazardous?

Unlike several alternative products the TecLub AdBlue additive is non-hazardous, non-corrosive and non-irritant and therefore safe to use by both consumers and professionals.

### Some AdBlue or urea fluids are already treated with anti-crystallization additives; do we not risk an overdose by adding this additive?

Even in these cases overdosing is highly unlikely as the added quantities of effective components are relatively small. A "double" dose has no influence on the effectiveness/durability/specification of the AdBlue, but would have no other advantages. The performance is not further improved by adding more.

### What about the stability of the AdBlue plus additive mixture?

Adding this product has no influence on the stability of the AdBlue. The shelf life of the AdBlue remains unchanged. The AdBlue specification is not changed.

### A competitor brand uses a surfactant like undecyl glucoside. What is the difference with your product?

This is an additive with a specific type of surfactant, which *potentially* is in breach with a Yara / TOTAL patent. Furthermore, by adding this to AdBlue you will change the AdBlue specification. The surface tension is changed and significant foaming may occur. Addition puts you outside the AdBlue standard. In addition, such products are often classified as "hazardous" as they are irritant and can potentially cause severe damage to eyes. The TecLub AdBlue additive is not in breach with any patent, keeps the AdBlue within specification, is compliant with ISO 22241, limits the foaming characteristics and is non-hazardous!



**When I used an AdBlue additive of another brand the AdBlue started to foam after mixing. The foam did not disappear quickly afterwards. Is this the same with your product?**

The TecLub AdBlue additive is formulated in such a way that it limits or prevents heavy foaming. This is important because AdBlue is added under pressure or movement under which foaming might (re)occur. With such "foaming" SCR additives, the SCR cat will not be injected with mist but with foam, resulting in suboptimal performance, or even no performance at all.

**Does the additive also work in case of extreme crystallization where the SCR injector is completely clogged?**

No, in case of a complete blockage of the system the additive cannot reach the affected parts and therefore cannot do its work. In order to work, there must be a flow of urea fluid. In such cases, the SCR system should be cleaned or repaired manually.

**Why does my simple test not work? I took 2 bottles of AdBlue and added the required amount of additive to one of the bottles. I poured a small amount of the treated AdBlue in one petri-dish and the untreated AdBlue in the other petri-dish. In both cases, the AdBlue crystallised in the same way and timeframe.**

Of course, the AdBlue crystallizes just like that in a petri-dish. The additive prevents crystallization and deposits in the SCR system in real operating conditions. It does not prevent crystallization of urea when it dries up. Though not a reflection of a real life process, a simple test you can do is spray the AdBlue additive on parts in the SCR system with urea crystallisation. You will see the crystals slowly disappear. Note the effectiveness of the additive will significantly increase with temperature. With each 10°C of temperature increase the effectiveness will almost double.

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