

Pollution Prevention Technical Information Note

INFORMATION ON STORING AND USING ADBLUE – Updated Nov 2009

Background

Stricter exhaust emissions for commercial vehicles with diesel engines, (buses, trucks, HGVs & coaches) have been issued by the EU, (Euro 4 in Oct 2005 and Euro 5 in 2008). To meet these standards the automotive industry has adopted several technologies; one such is **Selective Catalytic Reduction** (SCR), where harmful exhaust gases are converted to nitrogen and water by catalytic conversion. **Adblue** is the trade name for a catalytic reduction agent used for this process. It's stored at refuelling sites and will become a common feature at filling stations for commercial diesel vehicles and private depots. Vehicles will have an Adblue tank, from which it is injected into the engine exhaust stream immediately after the combustion chamber. Consumption of Adblue will be from 4 to 6% of the diesel consumption.

Storing and using Adblue.

Adblue is an aqueous solution of urea. If it is stored, handled and used according to manufacturers' instructions and our guidelines, it poses a minimal risk to operators and a limited risk to the environment. However, urea solution is very polluting to groundwater and watercourses and has caused several serious pollution incidents from spillages at farms where it was stored and used as a fluid fertiliser.

Because urea solution contains ammonia it is corrosive to some metals, such as copper and it's alloys. If tanks and pipework become corroded there is a higher risk of a spill that could cause pollution – which is against the law.

It's important that Adblue is stored in containers that are specifically designed and manufactured from materials that are suitable for use with urea. The same applies to all storage ancillary equipment, such as valves, dispensing nozzles and pipework.

Adblue is soluble in water and should be kept out of surface water drainage systems discharging to the environment. It **will not** be removed in an oil separator so it's important to isolate dispensing area drainage from the surface water system to reduce the possibility of spills and drips causing pollution.

Reduce the risk of causing pollution

Tank manufacturers are now producing storage solutions specifically for **Adblue**. Steel and plastic storage systems with integral secondary containment are available. Some companies are proposing to supply specialist Intermediate Bulk Containers (IBCs) that are delivered full and then collected when empty. We recommend that you use storage and dispensing systems that are specifically designed for use with Adblue.

You should make sure that:

- your container, pipework and dispensing equipment are suitable for use with urea;
- you have secondary containment for the container and ancillary equipment;
- the dispensing area drainage is isolated from surface water drains;
- you have a trigger nozzle with an auto shutoff to dispense Adblue. Make sure that the nozzle can not be left in the open position;
- you have **appropriate emergency equipment to deal with large and small spills. For example, you could use proprietary spill kits, drain mats, pipe blockers, or permanent valves on drainage systems to provide containment;** and
- you have an emergency plan and suitable training for dealing with spillages or other accidents. **See our [Pollution Prevention Guidance Note 21 Incident Response Planning](#).**

Please note – currently there are no specific regulations requiring you to use and store Adblue according to this good practice guidance but, if we believe there is a significant environmental risk from your activities, we could use our powers under The Anti-Pollution Works Regulations to make you do so.

Need more information?

Contact your local office on 08708 506506, or email enquiries@environment-agency.gov.uk. For general pollution prevention advice see our booklet and DVD *Pollution Prevention Pays*, available from our Prevent Pollution home page.