# **What you need to know if you transport fuel in a ‘bowser’ on Irish roads**

‘**Bowser’** is a term frequently used by the manufacturers and suppliers of intermediate bulk containers (IBCs) or tanks fitted to a wheeled trailer for carrying various fuels, including diesel or gas oil (UN 1202), kerosene (UN 1223) or petrol (UN 1203). ‘Bowsers’ are used in construction, agriculture, forestry operations and at aerodromes for the refuelling of machinery and aircraft.

The term ‘bowser’ is not used or defined in ADR, but ADR does provide for the carriage of petrol, diesel and other fuels such as kerosene and aviation fuel in [IBCs](#IBC) and [tanks](#Tank). There is often a requirement to carry the fuel in such means of containment on a public road, and this carriage must therefore meet the relevant requirements of the ADR and our national regulations for the carriage of dangerous goods.

If in any doubt it is highly recommended that you seek the services of a dangerous goods safety adviser (DGSA), as failure to meet the requirements of the ADR and our national regulations will mean that you cannot carry fuel in your ‘bowser’ on public roads.

The checklist below has been developed to provide some guidance on what to look for when purchasing a new or second-hand ‘bowser’, or for checking if a ‘bowser’ you currently own is compliant with the regulations.

It is important to note that if you are carrying the fuel as follows, then **all** of the relevant provisions of the ADR apply, including the requirement for a **certified ADR driver**.

* In a tank as defined in ADR
* In an IBC, for diesel or gas oil (UN 1202) in quantities of 1000L or greater
* In an IBC, for kerosene (UN 1223) or aviation fuel (UN 1863, PG III) in quantities of 1000L or greater
* In an IBC, for petrol (UN 1203), in quantities of 333L or greater

If you are carrying fuel in smaller quantities as outlined below, then you meet the requirements of an ADR exemption called the ‘small load exemption’ (ADR 1.1.3.6), and fewer provisions of the ADR apply. Please refer to our [guide](https://www.hsa.ie/eng/publications_and_forms/publications/chemical_and_hazardous_substances/carriage_of_dangerous_goods_by_road_2021.html) for the carriage of dangerous goods by road, Section 5.2.

* In an IBC, for petrol (UN 1203), in quantities less than 333L, or,
* In an IBC, for kerosene (UN 1223), aviation fuel (UN 1863, PG III), diesel or gas oil (UN 1202), in quantities less than 1000L

|  |  |  |
| --- | --- | --- |
| **Checklist for the certification, inspection, testing and use of IBCs and tanks for the carriage of petrol, kerosene, diesel and gas oil on public roads** | | |
|  | **Intermediate Bulk Container (IBC)** | **ADR Tank (manufactured after 1 July 2003)** |
| Capacity | Less than 3,000L | Greater than 1,000L |
| ADR references  Construction, certification and inspection | Chapter 6.5 and 4.1.2 | Chapters 6.8 and 4.3 |
| UN design type marking IBC | Marks to indicate IBC manufactured and successfully tested to design type.  For example  UN31B/Y/0518/D/AZB/3000/1200  See note below for explanation of the different elements of the IBC code (link on webpage to relevant section) |  |
| Plate marking | The following marking is required (and may appear on a corrosion resistant plate permanently attached):  Capacity in L  Tare mass in Kg  Test pressure in kPa or bar  For metal IBCs: Body material and minimum thickness  Date of last leakproofness test (month and year)  Date of last inspection (month and year)  For metal IBCs: Serial number of manufacturer | The following marking shall appear on a corrosion resistant plate permanently attached:  Approval number  Manufacturers name/mark and serial number  Year of manufacture  Test pressure (gauge pressure)  External design pressure  Shell capacity  Design temperature  Date and type of most recent inspection (month, year)  Stamp of inspection body  Shell material  Test pressure |
| Construction, initial inspection and testing | Manufactured to ISO 16106:2006 or equivalent  Certificate to indicate:   * Conformity to design type including marks * Internal and external condition * Proper functioning of service equipment * Leakproofness test | Type Approval certificate  Certificate of initial inspection  Note: Tank certificates are issued by an inspection body approved or recognised by the competent authority in Ireland. |
| In-service inspection reports/certificates | Every two and a half years:  Report of results of inspection   * External condition * Proper functioning of service equipment * Leakproofness test   Every five years:  Report of results following checks and inspection:   * Conformity to design type including marks * Internal and external condition * Proper functioning of service equipment * Leakproofness test   Note: The reports of inspection must include the identity/mark of the competent person performing the inspection and test.  Repaired IBCs must meet the full testing and inspection requirements set out above. | Every 6 years  Certificate of Periodic inspection  At least every 3 years after the initial inspection and each periodic inspection  Certificate of intermediate inspection  Note: All tank inspections are performed and certificates are issued by an inspection body approved or recognised by the competent authority in Ireland.  Repaired tanks may require a certificate of exceptional inspection. |
| Additional Certificate if applicable |  | Vehicle certificate of approval issued by the RSA. Towing vehicle or tank vehicle must be either AT or FL spec (ADR 9.1.2.3). |
| UN marking and labelling of IBC | For an IBC with a capacity of greater than 450L, it must show the UN number for the dangerous goods on two opposite sides and be fitted with the Class 3 label and the environmentally hazardous substance mark.  For diesel carried in quantities above 1000L and petrol in quantities above 333L, blank orange plates must be fitted to the front of the towing vehicle and the rear of the IBC. |  |
| Placarding and marking of tank |  | It must be fitted with the Class 3 and environmentally hazardous substance placards on two sides and the rear.  It must be have ADR numbered orange plates front and rear (alternative plating provisions are also permitted in ADR – consult with a DGSA for further information). |
| Ensure risk assessments are completed for the safe handling and carriage of fuels and the necessary controls are put in place. | | |
| Ensure safe loading and unloading procedures are developed for all ‘bowsers’ and drivers are trained in these procedures. | | |
| Ensure a Transport Document is provided by the consignor to the driver and is aboard the vehicle when transporting the fuel on a public road. This is also required when the IBC or tank is empty uncleaned. | | |

Note: Explanation of UN code elements for IBC

**UN**  31B/Y/0518/D/AZB/3000/1200

|  |  |
| --- | --- |
| **UN** | The United Nations packaging symbol |
| **31B** | Aluminium IBC for liquids |
| **Y** | For Packing Groups II and III |
| **0518** | The month and year of manufacture |
| **D** | The state authorising the allocation of the mark |
| **AZB** | The name or symbol of the manufacturer or other identification of the packaging specified by the competent authority |
| **3000** | The stacking test load in Kg.  For IBCs not designed for stacked, the figure “0” is indicated |
| **1200** | The maximum permissible gross mass in Kg |

The ADR term *"**Intermediate bulk container" (IBC*) means a rigid or flexible portable packaging, other than those specified in Chapter 6.1, that:

* has a capacity of **not more than 3 m3 (or 3,000 L)** for solids and liquids of packing groups II and III;
* is designed for mechanical handling;
* is resistant to the stresses produced in handling and transport as determined by the tests specified in ADR Chapter 6.5.

The ADR term “tank” is as follows:

*"Tank"* means a shell, including its service and structural equipment. When used alone, the term tank means a tank-container, portable tank, demountable tank or fixed tank ... including tanks forming elements of battery-vehicles or MEGCs (multiple element gas containers).

*"Fixed tank"* means a tank having a capacity of **more than 1 000 litres** which is permanently attached to a vehicle (which then becomes a tank-vehicle) or is an integral part of the frame of such vehicle.

*"Tank-vehicle"* means a vehicle built to carry liquids, gases or powdery or granular substances and comprising one or more fixed tanks. In addition to the vehicle proper, or the units of running gear used in its stead, a tank-vehicle comprises one or more shells, their items of equipment and the fittings for attaching them to the vehicle or to the running-gear units.