Vehicle Certification Agency

Carriage of Dangerous Goods: Approval Scheme for Bulk Containers BK1 and BK2

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APPROVAL SCHEME FOR BULK CONTAINERS BK1 and BK2

(Other than freight containers that are fitted with a CSC plate)

Background

The carriage of dangerous goods by rail, road and sea is subject to the requirements of RID[1], ADR[2] and the IMDG Code[3]. Some substances may be carried in bulk (i.e. other than in packages or tanks) in containers meeting the design, construction, inspection and testing requirements of ISO 1496-4:1991, which have been approved in accordance with the Convention on Safe Containers (CSC).

Bulk containers that do not meet that standard cannot be approved under the CSC. Nevertheless they may be used for the carriage of dangerous goods if they have been approved for the purpose by the competent authority. These containers are usually skips or specially designed and/or constructed vehicle bodies.

The VCA Dangerous Goods Office has set up a scheme for the approval of bulk containers in accordance with 6.11.4 of RID/ADR and 6.9.4 of the IMDG Code, on behalf of The Secretary of State for Transport, who is the competent authority in that regard.

Overview

In most cases, it is the manufacturers of bulk containers who will apply for approval, as they possess the necessary design and construction specifications for their products. Applications for retrospective approval may be considered from operators of fleets of containers (see *Retrospective Approvals* below). Applications should be supported by a set of engineering drawings in A4 format showing the construction and dimensions of the shell, doors and lids (metal or plastic), lifting lugs, reinforcements, fastenings, locks and hinges, along with a welding plan and detail of the material type and thickness. If the container is closed by a sheet e.g. tarpaulin, then it should be described along with dimensions and method of retention.

The application must indicate the class or classes of dangerous goods for which the bulk container has been manufactured and the maximum safe working load which it will carry.

Applications must be accompanied by the appropriate fee.

The bulk container design will be assessed for compliance with the definition and construction requirements of RID/ADR and the IMDG Code and if acceptable, a unique approval code will be issued.

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[1] Regulations concerning the International carriage of Dangerous Goods by Rail (RID)

[2] The European Agreement on the Transport of Dangerous Goods by Road (ADR).

[3] The international Maritime Dangerous Goods Code (IMDG).

Definition

RID/ADR and the IMDG Code define bulk containers as follows:

Sheeted bulk container *(BK1)* means an open-top bulk container with rigid bottom (including hopper-type bottom), side and end walls and a non-rigid covering.

Closed bulk container (BK2) means a totally closed bulk container having a rigid roof, sidewalls, end walls and floor (including hopper-type bottoms). The term includes bulk containers with an opening roof, side or end wall that can be closed during carriage. Closed bulk containers may be equipped with openings to allow for the exchange of vapours and gases with air and which prevent under normal conditions of carriage the release of solid contents as well as the penetration of rain and splash water.

Construction

Bulk containers must be constructed in accordance with the requirements of Chapter 6.11 of RID/ADR (6.9 in the IMDG Code). Additional requirements for each class of dangerous goods where bulk transport is permitted are set down in 7.3.2 of RID/ADR and 4.3.2 of the IMDG Code and hence the construction needs to take account of these also.

Approval of Bulk Containers (other than vehicles)

No bulk container for dangerous goods shall contain a drain hole. For sheeted bulk containers, the sheet must have a means of being positively attached to the container. For closed bulk containers all opening shall be capable of being locked.

The Health and Safety Executive have published guidance document Waste 06 “Skip and container safety in waste management and recycling” this document forms the basis for the approval of skips as bulk containers. In the HSE publication all bulk containers shall meet the following requirements:

- All skips shall be metal
- The skip shell shall be fully welded on all external edges and corners.

Extra heavy-duty skips (e.g. those used for scrap metal) shall also be fully welded on the inside, and additional reinforcing plates fitted to the discharge corners. (Some manufacturers weld the inside and outside of all skips as standard practice.)

- All upper edges shall be reinforced with channel section.
- All drop-down doors shall have a locking device keeping them securely closed and a secondary lock fitted to the main lock to ensure that the door remains closed and safe during moving and transporting.

Locks shall be of robust construction to withstand the rough treatment they are likely to receive but shall be easy to operate. Loading doors fitted to the sides of large single-ended

skips rear-end loader (REL) skips shall have their hinges fitted towards the rear end of the skip, to avoid injury to the operator in the event of a door falling open while the skip is being discharged.

Lifting lugs shall:

- pass through horizontal channel sections which extend the full length of the skip or vertical channels welded between two horizontal channels, depending on the capacity of the skip

- have reinforcing plates welded to the inside of the skip shell where the shank of the lifting lug passes through the side plate and all channels which carry lifting lugs shall be fully welded to the side plate.

Skips may have plastic components such as lids or doors.

Any hinged covers fitted to skips should be light enough to permit safe opening and closing by hand from ground level. Hinges and locking devices should be designed for ease of operation and durability.

Approval of vehicles as bulk containers

Where the bodywork is permanently fixed to vehicles used for bulk transport, applications must include the same data as above and in addition detail the method of fixing the body to the chassis. Where a vehicle is designed and constructed as a bulk container, the bodywork (i.e. the load carrying compartment) including the floor and walls shall be designed to prevent leakage of the dangerous substance and must not contain any drain hole.

Inspection of bulk containers before approval

All bulk containers (including vehicles) may be required to undergo an inspection. If an inspection is necessary it will be subject to a charge to cover the costs incurred.

Marking of bulk containers

Bulk containers conforming to the CSC will bear the appropriate compliance marks, but there is no equivalent identification for non-CSC containers which nevertheless conform to the requirements of RID/ADR and the IMDG code. VCA will therefore issue a unique marking for each approved design, which by licence may be applied to serially produced bulk containers to signify competent authority approval.
Subject to the terms of the licence, each bulk container conforming to the approved design type shall be marked by means of a corrosion resistant metal plate of dimension 200 mm x 100 mm, permanently attached in a conspicuous place, readily accessible for inspection by enforcement authorities. The licence mark shall be applied to the plate in permanent form,

e.g. by stamping, engraving or embossing, in characters at least 12 mm high, and will be of the form:

BK1 or **BK2** - the code for the type of bulk container
GB - country code of the issuing competent authority
Nnnn - a unique four digit code issued to the approved design type
yy - the last two digits of the year of manufacture
xxxxx - a unique serial number of the bulk container, allocated by the manufacturer.

An example of the approval mark is:

BK1/GB/0022/24/00068

The mark may be positioned in a single line as above or with the serial number on a second line, as:

BK1/GB/0022/24
00068

The mark may only be applied by the licensee or someone acting on their express authority, to bulk containers conforming to the approved design type. VCA DGO maintains a register of approved design types, and manufacturers will be required to make an annual return of the serial numbers of bulk containers they have produced. In the case of approvals held by operators, returns shall confirm the number of containers of each design type on the fleet, and the numbers of any new examples of the type procured since the last return.

Validity of approvals

A design type approval will be valid whilst the design, material(s) and method of construction of the bulk container are unchanged. However, the licence permitting the approval holder to apply the mark to serially produced bulk containers is renewable annually. The approved design shall be reviewed for compliance once every five years.

Fees

The current fees for various functions under the scheme are published periodically on the VCA dangerous goods Office website. Present (October 2025) fees, exclusive of VAT are:

- Design approval and licence fee to 31 December £500
- Annual licence fee per design type £200

Retrospective Approvals

Operators of bulk containers who wish to apply for retrospective approval for their existing fleet must be able to provide suitable drawings and specifications. Such applications will be considered on a case by case basis but will almost always be subject to an inspection of representative specimens of the type(s) for which approval is requested.

Applications

Applications for approval of a bulk container should be sent to:

Vehicle Certification Agency
Dangerous Goods Office
Ashcombe House
5 The Crescent
Leatherhead
Surrey
KT22 8DY

Or by email to: dgenquiries@vca.gov.uk