

SCHEDULE 11

Regulation 2(1)

Requirements for Type A packages

1. A Type A package shall meet the requirements of Schedule 2 and of this Schedule.
2. The smallest overall external dimension of the package shall not be less than 10 cm.
3. The outside of the package shall incorporate a feature such as a seal, which is not readily breakable and which, while intact, will be evidence that it has not been opened.
4. Any tie-down attachments on the package shall be so designed that, under both normal and accident conditions of transport, the forces in those attachments shall not impair the ability of the package to meet the requirements of these Regulations.
5. The design of the package shall take into account temperatures ranging from -40°C to 70°C , giving special attention to freezing temperatures for liquid contents and to the potential degradation of packaging materials within the given temperature range.
6. The design, fabrication and manufacturing techniques shall be in accordance with national or international standards, or other requirements, acceptable to the Secretary of State.
7. The design shall include a containment system securely closed by a positive fastening device which cannot be opened unintentionally or by a pressure which may arise within the package.
8. Special form radioactive material may be considered as a component of the containment system.
9. If the containment system forms a separate unit of the package, it shall be capable of being securely closed by a positive fastening device which is independent of any other part of the packaging.
10. The design of any component of the containment system shall take into account, where applicable, the radiolytic decomposition of liquids and other vulnerable materials and the generation of gas by chemical reaction and radiolysis.
11. The containment system shall retain its radioactive contents under a reduction of ambient pressure to 25 kPa.
12. All valves, other than pressure relief valves, shall be provided with an enclosure to retain any leakage from the valve.
13. A radiation shield which encloses a component of the package specified as a part of the containment system shall be so designed as to prevent the unintentional release of that component from the shield. Where the radiation shield and such component within it form a separate unit, the radiation shield shall be capable of being securely closed by a positive fastening device which is independent of any other packaging structure.
14. A package shall be so designed that if it were subjected to the tests specified in paragraphs 6 to 11 of Part III of Schedule 15, it would prevent:
 - (a) Loss or dispersal of the radioactive contents; and
 - (b) Loss or shielding integrity which would result in more than a 20% increase in the radiation level at any external surface of the package.
15. The design of a package intended for liquid radioactive material shall make provision for ullage to accommodate variations in the temperature of the contents, dynamic effects and filling dynamics.
16. A Type A package designed to contain liquids shall, in addition:

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- (a) be adequate to meet the conditions specified in paragraph 14 if the package is subjected to the tests specified in paragraph 12 of Part III of Schedule 15; and
- (b) either
 - (i) be provided with sufficient absorbent material to absorb twice the volume of the liquid contents. Such absorbent material must be suitably positioned so as to contact the liquid in the event of leakage; or
 - (ii) be provided with a containment system composed of primary inner and secondary outer containment components designed to ensure retention of the liquid contents, within the secondary outer containment components, even if the primary inner components leak.

17. In the case of a Type B package which has been designed and approved for liquids and which is consigned as a Type A package containing the same liquids and not exceeding the A₂ limit for those liquids, the requirements of paragraph 16(b) above shall not apply.

18. A package designed for compressed gases or uncompressed gases shall prevent loss or dispersal of the radioactive contents if the package were subjected to the tests specified in paragraph 12 of Part III of Schedule 15. A package designed for contents not exceeding 40 TBq of tritium or for noble gases in gaseous form with contents not exceeding A₂ shall be excepted from this requirement.

19. In the case of a package containing uranium hexafluoride the package shall comply with the provisions of marginal 3771 of ADR.