

SCHEDULE 12

Regulation 2(1)

General requirements for Type B packages

1. A Type B package shall meet the requirements of Schedule 2, and of paragraphs 2 to 13, and 15, of Schedule 11, and of paragraph 14 of Schedule 11 except as specified in paragraph 8(a) below, and the requirements of this Schedule.

2. A package shall be so designed that, if it were subjected to the tests in paragraphs 13–16 of Part III of Schedule 15, it would retain sufficient shielding to ensure that the radiation level at 1 metre from the surface of the package would not exceed 10 mSv/h with the maximum radioactive contents which the package is designed to carry.

3. A package shall be so designed that, under the ambient conditions specified in paragraphs 5 and 6, heat generated within the package by the radioactive contents shall not, under normal conditions of transport, as demonstrated by the tests in paragraphs 6–11 of Part III of Schedule 15, adversely affect the package in such a way that it would fail to meet the applicable requirements for containment and shielding if left unattended for a period of one week. Particular attention shall be paid to the effects of heat which may:

- (a) alter the arrangement, the geometrical form or the physical state of the radioactive contents or, if the radioactive material is enclosed in a can or receptacle (for example, clad fuel elements), cause the can, receptacle or radioactive material to deform or melt; or
- (b) lessen the efficiency of the packaging through differential thermal expansion or cracking or melting of the radiation shielding material; or
- (c) in combination with moisture, accelerate corrosion.

4. A package shall be so designed that, under the ambient condition specified in paragraph 5, the temperature of its accessible surfaces shall not exceed 50 °C, unless the package is transported under exclusive use.

5. In applying paragraphs 3 and 4, the ambient temperature shall be assumed to be 38°C.

6. In applying paragraph 3 above, the solar insolation conditions shall be assumed to be as specified in Table XI of Schedule 36.

7. A package which includes thermal protection for the purpose of satisfying the requirements of the thermal test specified in paragraph 15 of Part III of Schedule 15 shall be so designed that such protection will remain effective if the package is subjected to the tests specified in paragraphs 6–11 and 14(a) and (b) or 14(b) and (c) of Part III of Schedule 15, as appropriate. Any such protection on the exterior of the package shall not be rendered ineffective by conditions likely to be encountered in routine handling or routine transport, or in accident conditions of transport, and which are not simulated in the tests referred to above, e.g., by ripping, cutting, skidding, abrasion, or rough handling.

8. A package shall be so designed that, if it were subjected to:

- (a) the tests specified in paragraphs 6–11 of Part III of Schedule 15, it would restrict the loss of radioactive contents to not more than $10^{-6} A_2$ per hour; and
- (b) the tests specified in paragraphs 13, 14(b), 15 and 16 of that Part of that Schedule and the test in paragraph—
 - (i) 14(c) of that Part of that Schedule, when the package has a mass not greater than 500 kg, an overall density not greater than 1000 kg/m³ based on the external dimensions, and radioactive contents greater than 1000 A₂ not as special form radioactive material, or
 - (ii) 14(a) of that Part of that Schedule for all other packages,

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it would restrict the accumulated loss of radioactive contents in a period of one week to not more than $10 A_2$ for krypton-85 and not more than A_2 for all other radionuclides.

Where mixtures of different radionuclides are present, the provisions of paragraphs 4 to 6 of Schedule 1 shall apply except that for krypton-85 an effective A_2 value equal to 100 TBq may be used.

For the purposes of sub-paragraph (a) above, the evaluation shall take into account the requirements of Regulation 21.

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