

Hazardous Materials Transport Regulations (Synthetic)

Section 1: General Provisions

1.1 Scope

These regulations apply to the transport of hazardous materials (HazMat) by road and rail.

1.2 Classification

Materials are classified into 9 classes.

- * **Class 1:** Explosives
- * **Class 7:** Radioactive Materials

Section 2: Specific Requirements for Class 7 (Radioactive)

2.1 Ambient Conditions

- * **Temperature:** For Type B(U) packages, the ambient temperature during transport must not exceed 38°C (100°F) unless the package allows for higher temperatures as specified in its Certificate of Compliance.
- * **Pressure:** The containment system must retain integrity under a reduction of ambient pressure to 60 kPa (0.60 bar).

2.2 Separation Distances

Packages must be separated from occupied areas by at least:

- * 2 meters for Transport Index (TI) < 1.0
- * 4 meters for TI >= 1.0 and < 5.0

2.3 Contamination Limits

Non-fixed contamination on the external surfaces of any package shall not exceed:

- * 4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters.

- * 0.4 Bq/cm² for all other alpha emitters.

Section 3: Emergency Response

3.1 Leaking Packages

If a package is found to be leaking:

1. Isolate the area for at least 50 meters in all directions.
2. Notify the Radiation Safety Officer (RSO) immediately.
3. Do not touch the package without protective gear.

3.2 Fire

In case of fire involving Class 7 materials:

- * Use water spray to keep packages cool.
- * Do not move damaged packages until assessed by an expert.