

RADIOACTIVE MATERIALS (SPECIAL FORM / LOW TO HIGH LEVEL EXTERNAL RADIATION)

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Undamaged packages are safe; contents of damaged packages may cause external radiation exposure, and much higher external exposure if contents (source capsules) are released.
- Contamination and internal radiation hazards are not expected, but not impossible
- Type A packages (cartons, boxes, drums, articles, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Radioactive sources may be released if "Type A" packages are damaged in moderately severe accidents.
- Type B packages, and the rarely occurring Type C packages (large and small, usually metal) contain the most hazardous amounts. They can be identified by package markings or by shipping papers. Life threatening conditions may exist only if contents are released or package shielding fails.
- Radioactive white-I labels indicate radiation levels outside single, isolated, undamaged packages are very low (less than 0.005 mSv/h (0.5 mrem/h)).
- Radioactive Yellow-II and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mrem/h one meter from a single, isolated, undamaged package.
- Radiation from the package contents, usually in durable metal capsules, can be detected by most radiation instruments.

Water from cargo fire control is not expected to cause pollution.

FIRE OR EXPLOSION

- Packagings can burn completely without risk of content loss from sealed source capsule
- Radioactivity does not change flammability or other properties of materials.
- Radioactive source capsules and Type B packages are designed and evaluated to withstand total engulfment in flames at temperatures of 800° C (1475° F)

PUBLIC SAFETY

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on next page.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind
 - Keep unauthorized personnel away
- Delay final cleanup until instructions or advice is received from Radiation Authority
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PROTECTIVE CLOTHING

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 100 meters (330 feet)

Fire

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

FIRE

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do without risk
- Do not move damaged packages; move undamaged packages out of fire zone

Small Fires

- Dry chemical, CO₂, water spray or regular foam.

Large Fires

- Water spray, fog (flooding amounts).

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Damp surfaces on undamaged for slightly damaged packages are seldom an indication of package failure. Contents are seldom liquid. Content is usually a metal capsule, easily seen if released from package.
- If source capsule is identified as being out of package, **DO NOT TOUCH**. Stay away and await advice from Radiation Authority.

FIRST AID

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured persons.
- Persons exposed to special form sources are not likely to be contaminated with radioactive material.
- Apply artificial respiration if victim is not breathing
- Administer oxygen if breathing is difficult.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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EMERGENCY RESPONSE TELEPHONE NUMBERS

UNITED STATES

1. CHEMTREC®

1-800-424-9300

(Toll Free is U.S., Canada, and the U.S. Virgin Islands)

703-527-3887 For Calls originating elsewhere

(Collect calls are accepted)

3. INFOTRAC

1-800-535-5053

(Toll Free is U.S., Canada, and the U.S. Virgin Islands)

352-323-3500 For Calls originating elsewhere

(Collect calls are accepted)

5. MILITARY SHIPMENTS

703-697-0218 – Explosives/ammunition incidents

(collect calls are accepted)

1-800-851-8061 – All other dangerous goods incidents

2. CHEM-TEL, INC.

1-800-255-3924

(Toll Free is U.S., Canada, and the U.S. Virgin Islands)

813-248-0585 For Calls originating elsewhere

(Collect calls are accepted)

4. 3E COMPANY

1-800-451-8346

(Toll Free is U.S., Canada, and the U.S. Virgin Islands)

760-602-8703 For Calls originating elsewhere

(Collect calls are accepted)