**Radiation:**  
Decay mode: Beta

<table>
<thead>
<tr>
<th>Major Betas:</th>
<th></th>
<th>Major Gammas:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max E (MeV)</td>
<td>Avg E (MeV)</td>
</tr>
<tr>
<td>0.346</td>
<td>0.1</td>
<td>99</td>
</tr>
<tr>
<td>0.267</td>
<td>0.075</td>
<td>0.81</td>
</tr>
<tr>
<td>0.044</td>
<td>0.011</td>
<td>0.0076</td>
</tr>
</tbody>
</table>

Max. Beta Range in air 74.74 cm or 2.45 ft  
Max. Beta Range in water 0.1 cm  
Avg. gamma E = 0.081 MeV

**Half – life:** 5.243 days

**Gamma constant:** 0.111 mR/hr per mCi at 30 cm

**Radiological data:**  
Min. Ingestion ALI: No Limit Given  
Min. Inhalation ALI: No Limit Given

**Doses:**  
Skin Dose: Reported for 1 μCi over 10 cm² of skin  
9.72 mrad/hr (gamma dose)  
Point Source: 391 mrad/hr (beta dose)  
Disk Source: 390 mrad/hr (beta dose)

**Shielding data:**  
Max. range for beta: Plastic = 0.08 cm  
Aluminum = 0.04 cm  
Tenth Value Thickness for average gamma: Concrete = cm  
Lead = cm

**Detection Information:**  
Usable Detectors listed with estimated efficiencies  
(Use efficiencies listed on instrument when available)  
Ludlum 3 with pancake probe at 1 cm: %  
Liq. Scint. Counter: %  
Ludlum 3 with NaI probe near surface: %  
Gamma Counter: %

**Action Quantities:**  
Bench top quantity must be less than N/A μCi  
Containers require labeling when greater than 1,000 μCi  
Rooms require posting when there is greater than 10000 μCi  
Contamination lasting more than 24 hrs require NRC notification when greater than N/A μCi