# MaterialMind - Material Recommendation Report

## General Recommendations:

The shielding container should be designed with a leak-tight seal to prevent radioactive material from escaping. The container should also be designed to withstand external pressures and temperatures.

| Material | Properties | Application | Rationale |
|---|---|---|---|
| Lead (Pb) | density: 11.34 g/cm³ tensile strength: 50-60 MPa t | General covering of the shielding container | High density and effective shielding |
| Tungsten (W) | density: 19.3 g/cm³ tensile strength: 1000-1400 M | Penetrating components of the shielding container | High density and high |
| Stainless Steel (SS) | density: 7.9-8.1 g/cm³ tensile strength: 500-700 M | Structural components of the shielding container | Good weldability and |