

Specialty Borosilicate Glass Bead: An Innovative Material for Nuclear Safety

IPR STATUS
Patented

APPLICATION/USES

- Immobilization of high level radioactive liquid waste containing radioisotopes (which remain active for prolonged period) for safe disposal without threat to the environment.
- Has a strong impact on sustaining country's ambitious three-stage nuclear recycle program and significant contribution to power requirement

SALIENT FEATURES

- Use of glass bead of desired sizes made out of the melted frits (as basic precursor towards the formation of glass bead) has enhanced the process throughout and hence facilitated the immobilization of radioactive nuclear waste being adopted in the Joule Melter
- Spherical beads of dimensions in the range of 2-4 mm with

stringent physical, chemical and mechanical properties have facilitated feeding into the Joule Melter and allow remote control of the entire operation.

- Technology is closely guarded and the material is critical for country's ambitious nuclear programme.

LEVEL/SCALE OF DEVELOPMENT

- Commercialized product
- Commercialized through industrial partner

LINE MINISTRY MAPPING/USER SECTOR

Department of Atomic Energy/
Nuclear Power establishments



Borosilicate Glass Frit



Borosilicate Glass Bead

