

Technical Data Sheet

Dynoseeds® RF 380

Particles for purification of radioactive waste.

Special features

- Monosized particles
- Solid resorcinol formaldehyde particles
- Ion exchange resin
- Binding of ^{137}Cs isotope
- Homogenous particle surface
- Very good chemical properties
- Very good hydraulic properties

Properties

Solid monosized resorcinol formaldehyde particles for removal of the radioactive isotope ^{137}Cs from radioactive waste has been developed in cooperation with Bechtel Inc. and Department of Energy in the US. Monosized resorcinol formaldehyde particles produced by Microbeads have shown to exhibit no measurable degradation in Cs removal performance by cycling and oxidation do not degrade the resin either chemically or hydraulically.

Superior hydraulic & chemical properties

↓
Durability gives cost savings

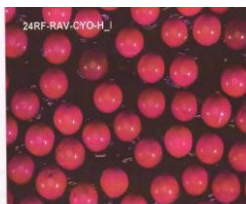


Figure 14. Virgin Resin in Hydrogen Form before 24° IX Testing



Figure 15. Resin in Hydrogen Form after Cycle 8 in 24° IX Column

Typical applications

Monosized resorcinol formaldehyde has a high selectivity and capacity for binding ^{137}Cs and can therefore be used to remove the radioactive isotope ^{137}Cs from aqueous alkaline solutions by ion exchange. Large ion exchange columns are filled with resorcinol formaldehyde particles and the radioactive waste is purified by passing through the columns. This product will be used in the purification of the radioactive waste at the large waste treatment plant, WTP at Hanford site, the Washington state USA.

<http://sti.srs.gov/fulltext/ms2004802/ms2004802.pdf>
<http://sti.srs.gov/WSRC-MS-2006-00257.pdf>
<http://aiche.confex.com/aiche/s09/techprogram/P143749.HTM>
<http://pnl.gov/rpp-wtp/documents/WTP-RPT-134.pdf>
<http://energyenvironment.pnl.gov/brochures/bechtelnational.pdf>

Particle properties

Particle density 1.35 g/cm³



Technical data

Dynoseeds®	D _{mean} [μm]	CV [%]
RF 380	380	<5

Particle size distribution by Coulter Multisizer 3:

