

Clarification material

Iron Composite Particle As Soil/Groundwater **Purifying Materials** [RNIP®]

FEATURES

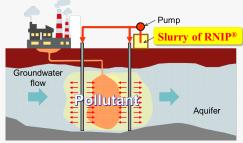
"RNIP" is iron composite nanoparticle which is applied TODA KOGYO's wet synthesis technologies. It can rapidly purify VOC, Volatile Organic Compounds, and insolubilize heavy metals.

CHARACTERISTICS

- Rapid purification of pollutant
 - The decomposition rate of TCE (trichloroethylene) is 100 times faster than common iron powder.
- In-situ purification for deep soil pollution It diffuses easily to soil and purifies VOC and heavy metals pollution at deep places in-situ.
- No secondly pollution Since RNIP® has no hazardous metals, it's an eco-friendly material with no secondly pollution.

SPECIFICATIONS

RNIP® is nanoparticle of core-shell structure of α-Fe and Fe₃O₄ (mean particle size: 70nm, BET specific surface area: 30m²/g). The slurry of RNIP® (specific gravity: 1.18 to 1.25, solid content concentration: 25wt%) is constructed by such as in-situ injection and purifies pollutant.

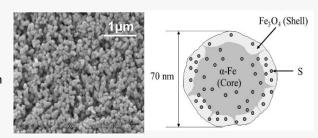


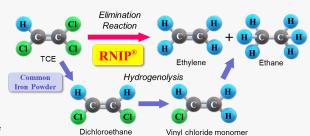
[In-situ injection method]

Since RNIP® has high reducing efficiency and increases the rate of decomposition, it suppresses the preparation of harmful chlorides generated during the decomposition of TCE by common iron powder. Also, RNIP® makes heavy metals harmless by ingesting them as insoluble compounds into its surface.

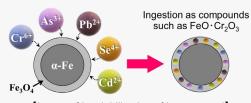
APPLICATIONS

- Purification of small/medium-sized spaces.
- Purification of operating factories, under-buildings and boundary areas.
- Purification of deep polluted places.





[Comparison of decomposition of trichlorethylene]



[Image of insolubilization of heavy metal]

RNIP is a registered trademark of TODA KOGYO CORP.



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