SPARTEL PTY LTD

Environmental Solutions for a Sustainable World

METALOK â
Solution for Heavy Metal Contamination

Heavy metals are amongst the major pollutants in the environment. Metals occur as pollutants in industrial and domestic waste waters, solid wastes and also pose a major problem with recycling organic waste into compost. They are not degradable and thus can build up in both solid and liquid wastes, and in receiving soils.

METALOK® is a unique product specially developed to manage heavy metal pollution in soils, and solid and liquid waste. METALOK® is a specially formulated integrated mineral compound that is very effective in reducing heavy metal contamination in soils and water.

METALOK® is designed to manage heavy metal pollution effectively in a range of environmental conditions by the integration of several active metal immobilisation mechanisms:

- Precipitation
- Chemisorption
- Adsorption
- Chelation
- Co-precipitation

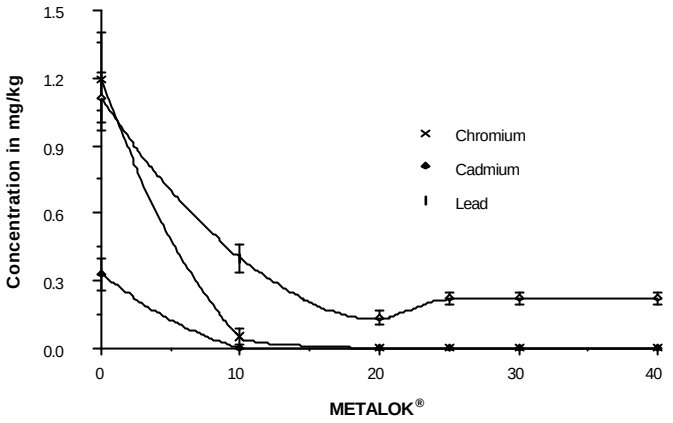
These mechanisms provide METALOK® with the flexibility and power to effectively deal with metal pollution in most situations.

METALOK â PERFORMANCE

METALOK® has a very high metal absorption capacity as shown in the table and figure below.

Metal Residue in solution after addition of METALOK â to a 400ppm metal solution, concentration of metal adsorbed and the Max. Adsorption Capacity of METALOK â

Metal	Residue mg/l	In METALOK â mg/100 g	Max. Capacity mg/100g
Cadmium	0.5	199.8	4000
Chromium	0.0	200	14500
Copper	0.0	200	15600
Lead	0.0	200	>15000
Nickel	0.9	199.6	4170
Zinc	0.2	199.9	8930



Reduction in leachable heavy metals from compost as a result of METALOK â

METALOK® can be applied to:

- Contaminated soils to achieve TCLP test compliance
- Composting of organic wastes, such biosolids or municipal waste, to reduce metal concentration and mobility
- Treatment of metal containing waste waters such as metal plating, photolabs, etc.

BENEFITS OF USING METALOK â

METALOK® offers the following unique advantages for processing liquid metal waste and metal contaminated organic waste and soils:

Liquid Waste

- Rapid removal of heavy metal compounds into solid state
- Easy separation of METALOK® and liquid
- Active at a wide pH range

Organic Waste Recycling

- Reduced total and available metal concentration
- Improves compost soil properties

Contaminated Soils

- In situ immobilisation of heavy metals
- Improved compliance with TCLP test

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