**Lewatit® TP 107 – Highly Selective and Regenerable Ion Exchange Resin for Efficient Removal of Polyatomic Oxyanions**

**Lewatit® TP 107** is a regenerable strong base anion exchange resin with an exceptionally high capacity. Its high selectivity towards polyatomic oxyanions such as chromate, molybdate and vanadate allows the efficient removal of these contaminants from wastewater and groundwater. Other water constituents, such as basic minerals, sodium, calcium, and chloride, which are beneficial for the water flavor, are less affected by the ion exchange process. This new product development facilitates our customers to save high operational costs by regeneration of the resin.

**Applications**

The high toxicity and potential carcinogenicity of many polyatomic oxyanions like CrO$_4^{2-}$, MoO$_4^{2-}$ and VO$_4^{2-}$, are attracting the attention of the broad public view. Groundwater contamination with hexavalent chromate occurs naturally and via wastewater from the leather tanning, textile, wood, and metal-finishing industry. As a result, the public health goal of 10 ppb for hexavalent chromium in drinking water was recently set by the U.S. state of California. Therefore, LANXESS developed a cost-efficient purification technology to fulfill these low discharge limits.

**Benefits**

- Up to 5 times higher Cr(VI) removal capacities compared with conventional strong base anion exchange resins
- Chromate reduction efficiency by 5 orders of magnitude from 100 ppm to 5 ppb
- Long resin lifetime
- High capacity even in presence of background constituents such as chloride and sulfate
- Savings on operating costs due to less frequent regeneration and thus diminished chemicals consumption
- Legal requirements regarding discharge limits are fulfilled in a cost-efficient manner
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