

Water Technologies & Solutions fact sheet

MetClear* MR2405

heavy metal precipitant

- Directly precipitates soluble sequestered, complexed or chelated metals
- Effective for various metals including, cadmium, chromium, copper, lead, mercury, nickel, silver and zinc
- Enables wastewater recycling for plant processes
- Can be applied during normal treatment process or as a polishing agent for wastewater treatment
- Applicable over wide pH range
- Completely water soluble

description and use

MetClear MR2405 is a patented, polymeric, liquid precipitating agent for heavy metals. It can be considered an alternative to conventional techniques for precipitation of higher levels of heavy metal ions. It is commonly used in conjunction with conventional treatment techniques, such as hydroxide precipitation. This unique product is capable of achieving lower heavy metal concentrations than either dimethyldithiocarbamate (DMDTC) or trithiocarbonate (TTC). Treated water heavy metal concentrations of parts per trillion are possible without filtration, which is of special importance due to potential increased mercury discharge regulations. As a result of the product's polymeric structure, it is able to form larger floc than DMDTC or TTC and may avoid the need for additional coagulants and/or flocculants for increased precipitated particle settling velocity.

typical applications

MetClear MR2405 is very effective in precipitating soluble chelated or sequestered heavy metals. Such heavy metals can be found in various industrial wastewaters, such as automotive manufacturing and assembly operations, steel manufacturing processes, plating operations, metal finishing, coal fired power plants and refining and petrochemical processes. A typical application would employ the product as a polishing step following conventional heavy metal polishing treatment, such as hydroxide precipitation. Product usage may range from 1 to 50 mg/l of MetClear MR2405 per mg/l of heavy metal ion present. The product may also be used without hydroxide precipitation, but higher dosages may be needed.

treatment and feeding requirements

MetClear MR2405 can be added to the existing treatment process provided the application pH is greater than 4.0. It is miscible with water in all dilutions; therefore, it may be diluted to any desired concentration to meet existing chemical feed pump capacity. Dilution water should be good quality with a pH near neutral or higher. Lower quality water may be used, but note that performance may be impacted negatively. If day tanks are used to feed diluted polymer, fresh solutions should be made daily. The product is commonly applied neat to an area of high turbulence, such as the suction side of a pump.

In practice, after the addition of MetClear MR2405 to a batch solution or continuous stream, the treated water should be agitated to allow for reaction before the metal precipitate settles.

general properties

Physical properties of MetClear MR2405 are listed on the Material Safety Data Sheet, a copy of which is available on request.

packaging information

MetClear MR2405 is a liquid product, available in a variety of containers. Consult your SUEZ representative for packaging options.

storage and handling

MetClear MR2405 should be stored in a cool, dry environment. Keep container closed when not in use. Protect from freezing. If frozen, thaw and mix thoroughly prior to use.

Many storage and feed system materials of construction are compatible with MetClear MR2405. Details related to a particular application should be discussed with your SUEZ representative.

safety precautions

A Material Safety Data Sheet containing detailed information about this product is available on request.

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