

TREATMENT REAGENT  
FOR HEAVY METAL IONS  
NEP SERIES

#100-H

NEP CO., LTD

Nippon Environmental Protection

## NEP Series

Heavy metals in waste water of factories have been deposited and separated as hydroxides. There are plenty of methods based on a type of industry and a kind of toxic materials. It may be fairly difficult to be less than figure of regulations by such general treatment. The best procedure is demanded by a type of industry, facilities and treatment equipment, an actual figure of regulations. We have developed “NEP Series” as treatment reagents for heavy metal ions. The NEP Series reagents react with various heavy metal ions to form insoluble salts, which are easy handled to dispose. The NEP Series reagents for heavy metal ions have wide applicable and extraordinary performance.

### Characteristic of NEP #100-H

1. It is suitable for treatment of Cu and Ni ions, especially.

It is possible to treat EDTA, ammonium chloride, ammonium persulfate, ammonium citrate, and pyrophosphates that are unable to be treated by usual neutralization way.

2. Elimination rate of heavy metals is extremely high.

This way has high elimination rate, compared to the conventional neutralization method.

3. Easy handling

Your present facilities can be used, to which just be added the reagent.

4. Wide applicable

Effective pH range is 7~13.

Several sort of heavy metal ions coexisted (two valences and more ions) can be simultaneously removed.

5. Do not cause to increase COD

Due to use just a proper dose to a concentration of heavy metal ions, the active ingredients combine completely with metal ions to be fixed, so that they are not exhausted into water layer.

## How to use NEP #100-H

### 1. First it is adjusted to an appropriate pH by neutralization.

Heavy metal ions in a solution are to be flock as much as possible by way of neutralization. This process can effectively progress the following chemical reaction as well as saving amount of #100-H.

### 2. The point in use

#100-H is usually added to pH adjustment tank. #100-H is liquid. Use of dedicated tank is desirable. Do not mix to other chemicals. Both of neat solution and dilution can be used. #100-H is possible to be diluted freely based on an ability of adding pump and a size of tank.

### 3. Solution against a formation of fine flock

A color of reagent is rarely remained in upper liquid. The phenomenon is that the reaction product with #100-H is very fine and uncondensed. One of the solutions is to use 1-3 times of inorganic aggregation auxiliary.

### 4. Use of polymer coagulant

It is the same as usual aggregation and precipitation way by neutralization. Polymer coagulant can be added after an addition of aggregation auxiliary, if you use. Do not use polymer coagulant when all solutions are filtered off, because filters may be clogged.

### 5. Addition amount of #100-H

The equimolar amount of #100-H is used to total heavy metal ions in waste water. Standard is that 0.1 mL (2-3 drops) of #100-H is used in 10 mg/L concentration of single heavy metal ion. Practical waste water containing several kinds of heavy metals, however, do not give theoretical result. Please ask to our NEP sales engineers about the reagent grade and addition amount. We can determine the best mode by a laboratory test.

Please read MSDS before use, although NEP #100-H is not a poisonous substance nor a dangerous object.

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## Standard Flow Sheet

Order to add ①→②→③→④

