



# MONSTER INHIBITOR



## CORROSION INHIBITOR FOR HOT DIP GALVANIZING INDUSTRY

### Over Pickling

Over pickling occurs when the pickling solution attacks and dissolves base metal after scale removal. The major causes are due to:

- Different thicknesses of scale layers and some scale being more deeply embedded into the metal than others, all of which require more time for removal.
- High temperature
- High acid concentration
- Long pickling time



Other quality problems due to over pickling also include possible **hydrogen embrittlement** (when the steel loses too much strength and becomes brittle) and excessive surface roughness due to pickling blisters.



### Why Use MONSTER INHIBITOR in the Acid Solution?

- Avoids excess dissolution of iron while cleaning the iron oxide
- Provides better quality of galvanized product and reduce cost of pickling
- Limits risk of hydrogen embrittlement in cold rolled and high strength steels
- Extends the service life of the pickling solution by reducing the dissolution of the iron
- Reduces the quantity of acid pickle waste.
- Contains components that increase the wettability of the base steel in fluxing.
- Smooths the surface ensuring a better finish to the article and lowers pick-up of zinc.



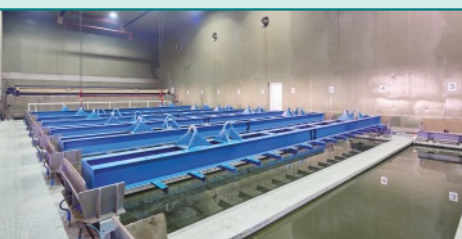
**MONSTER INHIBITOR** works by preventing the reaction between the acid and the base steel and allowing the reaction between the acid and the rust. It is absorbed on the surface of steel and form a layer that considerably reduces the attack of the acid on the metal. This reduces over pickling and lowers acid consumption.

The presence of **MONSTER INHIBITOR** has no negative effect on the pickling rate.

Fuming is reduced and there is less wear of the pickling facilities.



The **MONSTER INHIBITOR** concentration should be arranged by additions when fresh acid is added to pickling tanks.



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## ANI METAL

Engineered for Galvanizing



# MONSTER-INHIBITOR



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### Technical Characteristics

#### Maintenance of the Pickling Solution

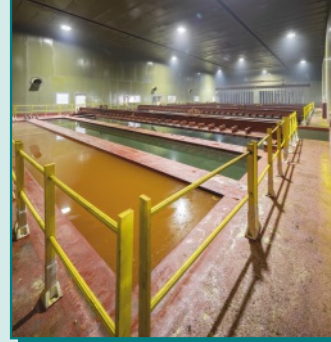
Consumption of the chemical takes place by carry-over.

Additions have to be made according to the fresh HCl added, as 1% **MONSTER INHIBITOR** of the amount of concentrated acid added.



#### Preparation of the Pickling Solution with **MONSTER INHIBITOR**

- Calculate the volume of the tank
- Fill 50% of the working level of the tank with water
- Fill **MONSTER INHIBITOR** in 1% of the amount of concentrated acid added in new bath
- Fill the rest of the tank to working level with HCl



#### Working Parameters

- Temperature : RT-35°C  
Process time : 15-90 minutes depending on the free HCl and Fe<sup>+2</sup> content on the pickling solution  
Iron concentration (Fe<sup>+2</sup>) : Maximum 125 g/liter  
Free HCl concentration : Minimum 25 g/liter

