

# HYDRA



# Devour 0.5-2.0mm

## Granular Ferric Hydroxide for Aquarium



# HYDRA®

## Features & Advantages

- ◆ Hydra Devour is a specially manufactured ferric hydroxide  $\text{FeO}(\text{OH})$  granular material for aquatic systems.
  - ◆ Hydra Devour's stable form and reactivity remain under long term aqueous conditions.
  - ◆ Hydra Devour rapidly removes phosphates, arsenic, copper, selenium, chromate and other heavy metals from aquatic water systems.
  - ◆ Hydra Devour's unique nano-sized porous surface structure has over  $250\text{m}^2/\text{g}$  ensuring super efficient absorption in all applications and systems.
  - ◆ Hydra Devour is ideal for aquariums both small and large as well as ponds.
- ◆ Absorption Capacity In fresh water Hydra Devour will absorb Phosphates 12-16g/kg, Heavy Metals 5-8g/kg.



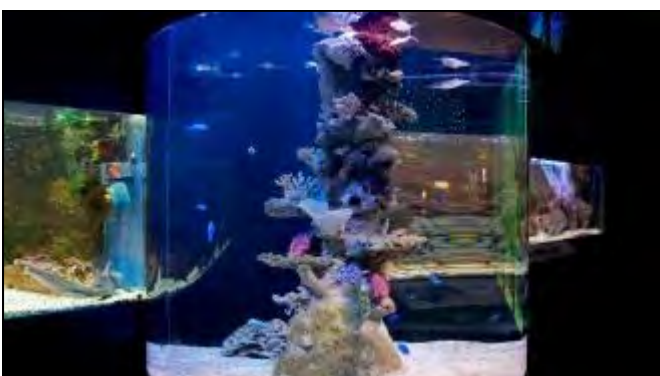
## Description



Hydra Devour is a high-performing adsorption granulate based on iron hydroxide. It was specifically developed for adsorptive removal of phosphate and silicate from water in fresh and seawater aquariums and garden ponds.

Due to its large surface area of over  $250\text{m}^2/\text{g}$ , it can bind phosphate ions quickly, effectively and binds them irreversibly to the filter medium.

All of our production facilities are audited yearly to international standards and the special production and drying procedure of Hydra Devour makes it a very robust, stable, long lasting media and highly reactive to phosphates.



Hydra Devour is available in two different grain sizes and can therefore be used both in special filter cartridges which operate on the suspension bed filter principle and filter bags that can be inserted in any multi-layer filter.

The advantage of Hydra Devour over other medias is its large adsorption surface. This makes the Hydra Devour media many times more effective than competitors small surface areas.

Hydra Devour is ideal for large applications with



thousands of  $\text{m}^2$  of water per day. The media is very stable and does not create clumps.

If the water is pre-filtered backwashing is not necessary for up to 1 month. The media is not soluble in fresh or sea water.

The phosphate binding capacity of Hydra Devour depends on a range of parameters such as the grain size used, the phosphorous concentration, the presence of competing ions (silicates) and the operating conditions in the filter.

## How To Use

### Application and usage rates:

Hydra Devour comes in two different granular sizes 0.5 - 2.0mm and 2.0 - 4.0 mm. The price is the same for each grain size.

### Use as Follows

#### Filter Cartridges, Fixed or Fluidized Bed Filters

Use grain size 0.5—2.0 mm.

#### Filter Bags

Use grain size 2 -4 mm.

#### Absorption Capacity Fresh Water

Phosphates 12-16g/kg, Heavy Metals 5-8g/kg.

#### Absorption Capacity Salt Water

Phosphates 6-8g/kg, Heavy Metals 3-4g/kg.



Rinse the granulate thoroughly under flowing water so that any dust formed during transport is removed.

A layer of filter cotton should be placed before and behind the filter packed bed so that the granulate is protected from contamination and to avoid possible discharge of particulate matter into the aquarium or pond.

The approach velocity of the water in the filter should not exceed 35m/h. Otherwise, undesirable movement of the granulate grains may occur which results in abrasion.



It is recommended to keep the filter flow as low as possible in order to achieve the best results.

If necessary reduce the flow rate.

### Table showing weight of Hydra Devour to remove 3ppm of Phosphate (PO<sub>4</sub>) from volume of water

Pack	Freshwater Volume		Seawater Volume	
	Treats Litres	Treats Gallons	Treats Litres	Treats Gallons
100g	1,000 litres	220 gallons	500 litres	110 gallons
250g	2,500 litres	550 gallons	1,250 litres	275 gallons
500g	5,000 litres	1,100 gallons	2,500 litres	550 gallons
1 kilo	10,000 litres	2,200 gallons	5,000 litres	1,100 gallons
5 kilo	50,000 litres	11,000 gallons	25,000 litres	5,500 gallons
20 kilo	200,000 litres	44,000 gallons	50,000 litres	22,000 gallons



## Laboratory Facilities

Hydra International Ltd.'s Research & Development Laboratories are a hub of activity where new products are developed and formulated. We have working relationships with our raw material suppliers, many of these suppliers are major world-wide chemical manufacturers with their own development laboratories.

As a company we are well known in the chemical industry for being receptive to cutting edge new chemicals which can be incorporated into our products to achieve performance advantages. An important part of the International Standards that we hold is that of constant improvement. We show that we have achieved this at every independent audit.



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