

# Crystal-Right™



**Crystal-Right™** silica crystals are a natural choice for today's water conditioning systems. The synthetic zeolite medium works by an ion exchange process which removes iron, manganese and hardness (and reduces ammonia).

The zeolite crystals uses sodium aluminosilicate carefully produced and processed by Mineral-Right using an exclusive technology.

The minimum pH requirement is 6.0 and **Crystal Right™** balances the pH in these acidic waters.

**Crystal Right™** works at it's best on clear water, i.e. when the iron/manganese are in a dissolved form. **Crystal Right™** will also reduce hardness with no extra treatment. The media bed can be sanitised with chlorine from time to time (some valves can do this automatically). The regeneration process is exactly the same as that used in a water softener and requires regeneration with salt (sodium chloride).

There are two types of **Crystal Right™**

- **CR 100** is used where the pH is between 6 and 7
- **CR 200** is used where the pH is 7 or above.

**Crystal Right 100** is the most durable of the manufactured minerals. It raises the pH value of acidic water while it reduces hardness, iron, and manganese. Low pH waters tend to be more corrosive than neutral or higher pH waters. This pH adjustment and reduction of undesirable minerals is maintained by the excellent filtration and backwashing properties.



<b>Physical Properties</b>	Bulk density	1.2 kg/l	Packaging	34kg (28litre) bags
<b>Operating Conditions</b>	Maximum concentration of iron + manganese		1044	5 mg/l
			1054	10 mg/l
			1354 & larger	15 mg/l
	Min TDS	80 ppm	Freeboard	50 % of bed depth
	Min Hardness	50 ppm	Service flowrate	40 bed-volumes/hr
	Min pH	CR 100	6	Backwash flowrate
CR 200		7	Salt dosage	160 gm/litre

## Regeneration

The amount of water produced between regenerations depends on the hardness, sodium & iron / manganese levels.

The apparent hardness = total hardness (mg/l CaCO<sub>3</sub>) + 2 x sodium [mg/l] + iron & manganese [mg/l]

The capacity or water produced between regenerations (Cap m<sup>3</sup>) at 100 mg/l apparent hardness is shown as Cap m<sup>3</sup> in the table overleaf.

e.g. for a 1354 CR 100 system this is 21.8 m<sup>3</sup>, or at 200 ppm is 10.9m<sup>3</sup>