

Filter media Type	Risk Associated with filter media scale 0 (best) to 4 (worst)						Risk Score
	Risk to the supplier or the installer	Risk to the public			Risk to the public if filter laterals fail		
		Dust / silicosis / cancer	Water quality, disease and parasitic infection	air quality, respiratory disease	building structure, stress corrosion cracking	Eye damage, ingestion, abrasion	
AFM® <sup>1</sup>	0	1	1	0	3	0	5
crushed glass <sup>2</sup>	1	3	3	3	5	3	18
good quality sand <sup>3</sup>	2	2	2	2	2	1	11
economy sand <sup>4</sup>	3	4	3	3	2	2	17
zeolites <sup>5</sup>	4	4	4	4	3	1	20
activated carbon <sup>6</sup>	1	1 to 3	2 to 4	2 to 4	1	3 to 4	10 to 17

1. AFM® is manufactured by Dryden Aqua by very strict quality control procedures under ISO 9000 : 2008 procedures with independent regular audits to insure compliance
  2. Crush glass can not be regulated or certified, there may be everything from organic toxins to heavy metals, hepatitis or AIDS contaminated syringes
  3. A good quality filter sand is actually a very good filter media for pools and drinking water, but AFM® will provide up to 80% better solids and dissolved organics removal performance
  4. There is huge variability in the quality of sand available, if you use sand then only use the best available sand.
  5. Dr.Howard Dryden completed a PhD on zeolites and is a leading authority on zeolite filtration systems in Europe, Dryden Aqua also supply zeolites but not for swimming pool applications
  6. Activated carbon, if small carbon filters are used and changed on a regular basis then they can improve water quality.
- The above table relates to activated carbon in the pool recycle loop, when used properly it will give good results, but if left in the filter for months or years it will cause risk associated issues.

Risk range	Risk implications
0 to 5	best possible mechanical filtration media
6 to 10	very good filter media for all applications
11 to 15	acceptable filter media should give good results
>15	Considered a public health risk and should not be used

#### Key Points about AFM®

AFM® prevents Lung damage. If your eyes sting when swimming, the chemical by-products in the water and just above the surface will also be damaging your lungs. Chlorine is the best disinfect to use in a swimming pools and the only product compliant with German DIN standards, but it forms by-products which are toxic, cause lung damage and can lead to asthma in children. AFM® filter media prevents the formation of toxic chemicals, making chlorine safe to use

With AFM® and NoPhos is possible run a busy public pool at 0.5mg/l free chlorine and less than 0.2mg/l combined, we have even consistently achieved combined chlorine levels below 0.02mg/l in 25m pools with over 1000 bathers per day.

AFM® is self sterilizing and does not incubate human pathogenic organisms such as Legionella and MRSA

AFM® is a much more effective a barrier than sand to Cryptosporidium oocysts, AFM® therefore prevent gastroenteritis and other serious intestine diseases related issues.

AFM® saves money on chemicals and power, and gives you much cleaner, brighter and safe water in which to swim

If you use AFM® in a DIN standard filtration system at appropriate water flow rates (with NoPhos and coagulation with APF) you will be able to operate a public swimming pool with a free chlorine level of 0.5mg/l, with a combined chlorine level consistently less than 0.2mg/l, turbidity levels less than 0.01 NTU and there will be virtually no trichloramines or trihalomethane. The chlorine and chemical demand will drop by up to 90%, water demand will drop by 75%.

Dryden Aqua Environmental & Public Health Policy "Chlorine is the best disinfectant that we have for swimming pools, however any process, technology or operational procedure that increases chlorine demand should not be permitted because the concentration of toxic chlorine reaction products in the water and air just above the surface of the water, is linked to chlorine consumption". At Dryden Aqua we endeavour to provide systems and develop technology that improves our environment and minimises the use of chemicals

Edinburgh Leisure's, policy is to use AFM® in all their Swimming Pools. Edinburgh Leisure is a leading leisure trust with a turnover of £18 million, 630 employees and over 3.3 million customers a year. To help these customers stay active they manage swimming pool leisure facilities for the City of Edinburgh Council . The atmospheric conditions will dramatically improve, you will not only be protecting the public but the fabric of the building and the air handling systems. AFM® is a proprietary product of Dryden Aqua however we also have a duty of care to the public and it is essential that all of the facts are made public.

#### What increases chlorine consumption ?

1. High water flow through filters, the optimum is less than 15 m/hr
2. UVc consumes chlorine (approx 200% increase) and generates carcinogenic THMs
3. Ozone systems increase chlorine demand by up to 500%. a small percentage of the extra chlorine is absorbed by the carbon filters, but most of the extra chlorine forms volatile chlorine reaction products.
4. Any organic chemicals especially anionic surfactants should not be permitted in the water
5. Bathers must shower before entering the pool
6. Sand, zeolites, activated carbon, anthracite or any high surface area media that supports the growth of bacteria should not be permitted if there is a better alternative.
7. Coagulation and flocculation must be used in all public pools.
8. Only DIN standard vertical filters to be used, horizontal filters and non DIN standard filters should not be permitted in a public pool