

Authorised by: Thomas McLaughlin

Signed:



Instructions For Use: Purafloc™ 001

1. Description of the Product

Purafloc™ 001 is a water-based dispersion of activated carbon.

Purafloc™ 001 is a viscous, opaque black liquid. It is non-volatile containing >70% water.

The product is supplied in bulk containers and should be stored in accordance with the instructions contained in this document.

2. Description of Product Use

- i. Purafloc™ 001 is used to aid the removal of organic contamination in the potable water treatment process.
- ii. Purafloc™ 001 must only be added to the treatment process in accordance with this Instruction for Use (IFU) document.
- iii. Purafloc™ 001 must only be added at the dosing points described in this document and must not be added at any other part of the treatment process.
- iv. Purafloc™ 001 must not be mixed with any other chemicals.
- v. The maximum allowable dose of 150mg/l should not be exceeded.

3. Product Application

3.1. Delivery and Storage

3.1.1. *Delivery*: Purafloc™ 001 will be delivered by bulk transport or supplied in bulk containers.



3.1.2. *Storage*: It is important that the product is stored in a bunded storage area and that any spills are collected in accordance with the attached MSDS.

Purafloc™ 001 should be protected from freezing.

3.1.3. *Shelf-Life*: Purafloc™ 001 has a shelf life of 12-months from the date of manufacture. Records should be retained onsite to enable the expiry date of batches to be tracked and controlled. Should any product onsite exceed its 12-month shelf life, this should be disposed of in accordance with the attached MSDS.

3.1.4. *Handling & PPE*: All staff handling Purafloc™ 001 should wear appropriate PPE and abide by the guidance provided in the attached MSDS.

3.1.5. *Spillage*: Avoid contact with spilled material. Do not allow to enter drains, sewers or watercourses.

Adsorb spillages onto sand, earth or any suitable adsorbent material. Dispose of in accordance with the European Directives on waste and hazardous waste.

3.2. Dosing Points

3.2.1. Purafloc™ 001 should only be dosed into the raw water inlet or the coagulant mixing stage as indicated in figure 1.

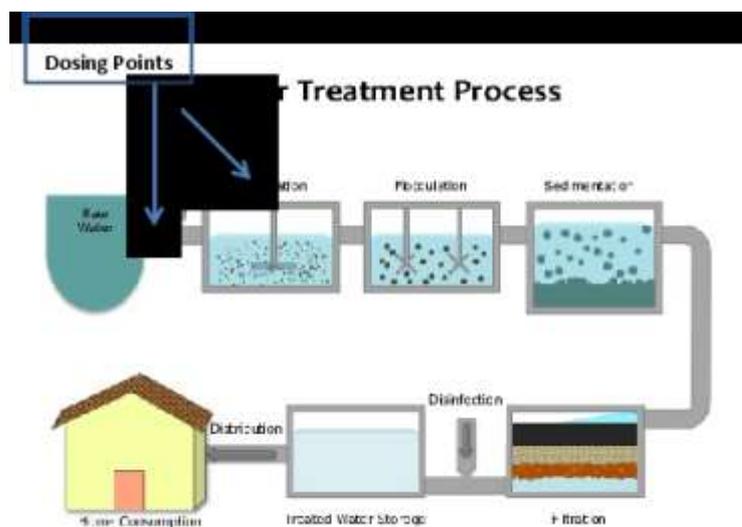


Figure 1: Purafloc™ 001 Dosing Points.



When Purafloc™ 001 is dosed after coagulant addition, a polyelectrolyte should be added to the mixing stages after Purafloc™ 001 addition. The polyelectrolyte can be selected based on jar tests, carried out in accordance with the local operating guidelines.

3.3. Dosage

The operational dose required should be determined by jar testing with the removal of target pollutants the primary objective. Typical Purafloc™ 001 dosages range from 25mg/l to 75mg/l. Where polyelectrolyte is required, the required dose should also be established during jar testing.

Once an operational dose is established, this should be monitored in accordance with section 5 in order to maintain the required dose.

Under no circumstances should the dose used be allowed to exceed 150mg/l.

In the event that product overdose is detected, dosing should cease until the cause of the overdose is established and rectified.

4. **Commissioning and Preparing a Product for Use, Including Disinfection**

4.1. When Purafloc™ 001 is being dosed for the first time, the required dosage should be determined by jar testing as described in section 3.3. This jar testing should establish the dose of Purafloc™ 001 required to reduce contamination to the required levels, whilst also establishing the type and dose of polyelectrolyte required to maintain water quality that is satisfactory and within the operational parameters of the site.

4.2. Purafloc™ 001 should be dosed into the selected dosing point using a suitable dosing/metering pump, with both pump and pipework approved for use in chemical dosing for water treatment.

4.3. Figure 2 below can be used as a guide to checking the product dosage.



Flow into Works (ML/Day)	Purafloc™ 001 Dosage				
	25mg/l	50mg/l	75mg/l	100mg/l	150mg/l
10	87 ml/30s	174 ml/30s	261 ml/30s	348 ml/30s	522 ml/30s
20	174 ml/30s	348 ml/30s	522 ml/30s	696 ml/30s	1,044 ml/30s
30	261 ml/30s	522 ml/30s	783 ml/30s	1,044 ml/30s	1,566 ml/30s
40	348 ml/30s	696 ml/30s	1,044 ml/30s	1,392 ml/30s	2,088 ml/30s
50	435 ml/30s	870 ml/30s	1,305 ml/30s	1,740 ml/30s	2,604 ml/30s

Figure 2: Approximate Purafloc™ 001 Dispensed in 30 Second Check Period Versus Flow Into Works and Dosage of Purafloc™ 001 Required.

- 4.4. The dose should be set by varying the pump stroke rate or displacement until the required amount of product is dispensed at the dosing point. This can be established by capturing the dispensed product into a measuring cylinder or container that can be weighed.
- 4.5. The dose of product should be checked regularly in accordance with the site operational guidelines.
- 4.6. The dose of polyelectrolyte should be similarly established and checked.
- 4.7. Samples of the coagulated (where Purafloc™ 001 is added prior to flocculation) or flocculated (where Purafloc™ 001 is added after coagulation with a flocculant/polyelectrolyte also added) water should be removed and allowed to settle periodically.
- 4.8. The settled turbidity will indicate whether the process is working correctly and whether any material is carrying over. Should the settled turbidity be elevated, Purafloc™ 001 dosing should be ceased and the jar tests repeated until the source of the increased turbidity is established.



5. Routine Monitoring and Maintenance

5.1. The dose of Purafloc™ 001 should be checked regularly (in accordance with section 4.4). This should be done in accordance with local operating procedures.

5.2. Turbidity can be used to monitor residuals of product.

5.3. Total Organic Carbon (TOC) and UV (254nm or 281nm) Absorption can also be used to monitor for product residuals.

6. Disposal and Fate

6.1. Sludge containing residual Purafloc™ 001 should be handled as for sludge containing Powdered Activated Carbon and disposed of in accordance with local regulations.

