

TRAMFLOC, INC.

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Technical Information Bulletin

TRAMFLOC® 1038 SOIL CONDITIONING POLYMER

Product Description

The Tramfloc® 1038 soil conditioning polymer is a granular high molecular weight anionic polyacrylamide. Tramfloc® 1038 is completely water soluble, biodegradable and safe to apply. Tramfloc® 1038 is used to control soil erosion, field run-off, furrow reshaping, and promote plant growth on slopes. This formulation reduces hardening and crusting of irrigated soils, reduces fertilizer and pesticide run-off, and improves water infiltration.

Background and Benefits

Tramfloc® 1038 anionic polyacrylamide is a very efficient soil conditioner applied to control erosion in agricultural applications. Agriculture consumes ~70% of the world's soft water but two-thirds is lost to evaporation, run-off and percolation into the soil. The judicious application of Tramfloc® anionic polyacrylamides can reduce water losses by 35%. Depending upon the type of soil and method of irrigation Tramfloc® 1038 increases the amount of water available to the roots while lowering the overall consumption of irrigation water. Water run-off, erosion, and lixiviation are greatly reduced, increasing savings in completion products such as fertilizers and soil amendments. Simple injection into the irrigation water system allows just a few ppm of polyacrylamide to viscosify the water. It will then form aggregates of fine particles on the soil's upper level where roots are formed. These aggregates will change the soil's porosity and enhance the water retention. Under most irrigation conditions about one-third of the water loss is due to run-off and lixiviation. Independent studies and full-field testing conducted in both the USA and Pacific Rim have demonstrated that the same production is reached while irrigating less frequently and applying less water per occurrence. Tramfloc® 1038 also lowers the losses by lixiviation of nutritional elements which are stored in the rooting zone prior to uptake. Tramfloc, Inc. makes these special polyacrylamides in tablet, granular and emulsion forms to suit almost every application.

Physical Chemical Properties

Appearance	White powder
Ionic character	Anionic
Molecular weight	Very high
Approx. bulk density (g/cm ³)	0.8
Brookfield viscosity (cps)	
@5.0 g/l	1800
@2.5 g/l	700
@1.0 g/l	300
Dissolution time at 5 g/l in water @25°C (minutes)	90
Usable pH range	5 - 9
Storage temperature (°C)	0 - 35
Shelf life (months)*	24

*When stored inside a building at a stable temperature between 0° and 35°C.

Content Analysis

Active ingredient

- 90% linear anionic copolymer of acrylamide and sodium acrylate (PAM)

Inert ingredients

- 10% humidity

Acrylamide monomer

- ≤500 ppm w/w

Application Rates

Tramfloc® 1038 rates will vary depending upon soil type, field slope and water volume in head ditch. Rate adjustments can be made during irrigation based on observed results. Product should be applied just after planting time or other soil disturbance but prior to irrigation or rainfall. Do not water prior to Tramfloc® 1038 application as soil structure will begin to breakdown. If crust has formed as a result of previous irrigation or rain, Tramfloc® 1038 will not reestablish soil structure.

Dosage in a surface irrigation system	1 – 3 kg/ha
Dosage in a volume of irrigation water	3 – 10 ppm

Additional Use Information

Tramfloc® 1038 reduces water requirements, abates dust and reduces crust formation. Tramfloc® 1038 will function across the pH range. See www.tramfloc.com for additional product application data.

Mixing and Dosage

Tramfloc® 1038 solution of 0.50% by weight should be dripped or metered into irrigation water upstream to a point of great turbulence to allow for effective dilution and economical application.

Packaging

Tramfloc® 1038 is available in 25 kgs net weight bags and 750 kgs sacks.

Handling and Storage

Handle all industrial chemicals with care and consult the material safety data sheet before product use. Tramfloc® 1038 should be stored in a cool, dry place.

Safety and Health

Spills of polymer are extremely slippery. Precautions should be taken to prevent them from entering lakes or streams. Tramfloc® Polymer Cleaner 348 can be used to remove residue from equipment and floors. Polymer can be flushed with copious amounts of water and disposed of according to local regulations or treated with an absorbent material, then collected for subsequent legal disposal. Tramfloc® 1038 has been shown to exhibit a low order of toxicity. Nevertheless, precautions should be taken to prevent inhalation, ingestion or contact with skin or eyes. Observing basic industrial hygiene precautions should prevent any health or safety hazards.

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