Intellectual Property updated June 2021

U.S. Patents

Note: Patents expire 20 years after the application date.

Relevant intellectual properties that are specific to onsite wastewater are highlighted in yellow

This does not include ROOTGUARD®

8,286,667 - Filed March 27, 2009. Prevention of bacterial adhesion irrigation conduits. This is the addition of Viton® to the inner layer of WASTEFLOW®

7,445,168 - Filed May 4, 2006. Anti-syphon emitter:

Being used by Geoflow. This is the best design for all SDI.

6,821,928 - Filed Oct. 31, 2002. Method to reduce the rate of diffusion of slow-release materials through polymers and process for making drip irrigation devices with long-term control of root growth

This is the nano-ROOTGUARD patent – being used by Geoflow and licensees.

6,334,958 - Filed May 5, 2000. Process for minute dosing of gravity media filters

Dead for the moment – could revive with recent interest in virus removal.

8,689,484 B2. Weed control and root barrier. This patent covers ROOTGUARD applied to a root barrier and is not an irrigation application.

15/143,359 Filed 4/29/2016. Root intrusion protection of subsurface drip irrigation pipe. The ROOTGUARD BAND. Granted in Israel and pending elsewhere. Licensed to Metzerplas, Saudi Drip, Caudal, Toro and Irritec.

62/202,849 Patent pending - filed 8/9/2015. Protection of soft plastic and rubber products from rodents, worms and insects – Biteguard™. R&D stage.

62/517839 Patent pending - filed 6/9/2017. A tracking system for buried plastic pipe.

15/931,450 U.S. pending patent first filed July 5, 2018. Application of soil modifying chemicals (hydrogels) that will absorb water from air using subsurface drip irrigation.

Other Country Patents:

The BAND May 2016:

Granted in Russia, Israel, Canada and South Africa.

Pending in: USA, China, Australia, New Zealand, India, Colombia, Peru, Argentine, Mexico, Canada, Brazil, Chile, Iran and Romania, and the European Union - (Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia,, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.)

Biteguard: Application covers all Patent Cooperation Treaty Countries. Intend to cover same countries as the Bead above except Argentina. We have a year to decide.

Australia 60/332,952 Method to reduce the rate of diffusion of slow-release materials through polymers and process for making drip irrigation devices with long-term control of root growth.

Australia 673728 Multi-layer drip irrigation conduit

Israel 161,641 Method to reduce the rate of diffusion of slow-release materials through polymers and process for making drip irrigation devices with long-term control of root growth.

ROOTGUARD® trademarks:

Israel 76407

USA 1,532,898

South Africa 89/0580

France 95/601472

Canada 505921

Mexico 525215

Spain 1995990

Italy 719271

Australia 644265

New Zealand 242494

Chile 484.349

Greece 129041

India pending

Turkey 76739285

GEOSHIELD® trademarks:

U.S. 3,573,445

Turkey 76739671

GEOFLOW® trademark:

E.U. 002302073

WASTEFLOW® trademarks:

USA 2,194,634

Israel 116425

Mexico 570651

New Zealand 285644

Australia 750334

European Com. 697094 pending

Turkey 76740139

Design Patents:

Pink outer stripes for WASTEFLOW

USA 3,235,941

Australia 1342038 – pending

UAE 62803

Turquoise inner lining for WASTEFLOW

USA 3,279,402

Australia 1085014

UAE 62804